

Submit to Appropriate
District Office

State of New Mexico

Energy, Minerals and Natural Resources Department

State Lease-6 copies

OIL CONSERVATION DIVISION

Fee Lease-5 copies

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

Form C-105
Revised 1-1-89

Corrected

WELL COMPLETION OR RECOMPLETION AND LOG *

1a. Type of Well: oil well ☐ gas well ☐ dry ☐ other: SMD

b. Type of Completion: new well ☒ work over ☐ deepen ☐
plug back ☐ diff. resvr. ☐ other ☐

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

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

WELL API NO.:
30-045-27341

5. Indicate Type of Lease:
N.E. Blanco Unit

6. State Oil & Gas Lease No.:
E-178-1

7. Lease Name/Unit Agreement
Name:
N.E. Blanco

8. Well No.: **502**

9. Pool Name or Wildcat:
Wildcat-Morrisson-Entrada

4. Well Location: Unit Letter: **G** : **1650** Feet From The **North** Line and **1480** Feet From The **East** Line
Section: **32** Township: **5N** # **7E** Ranges: **7W** NMPM **San Juan** County

10. Date Spudded: **11-12-89** 11. Date TD Reached: **12-22-89** 12. Date Compl. (ready to produce): **01-23-90** 13. Elev. (DF, RKB, RT, GR, Etc)* **6370' GL** 14. Elev. Csghd. **0000'**

15. Total Depth: **9050'** 16. Plug Back TD: **8990'** 17. If Mult. Comp.: How Many Zones? 18. Intervals Drilled By: 19. Rotary Tools TD 20. Cable Tools

19. Producing Interval(s), of this completion - Top, Bottom, Name:
No producing zones; Salt water disposal well.

20. Was Directional Survey Made?
YES

21. Type Electric and Other Logs Run:
GR, CCL, CBL, Induction, Neutron Density, SP, Gamma Ray

22. Was Well Cored?
NO

23. CASING RECORD (Report all strings set in well)

Casing Size	Weight, LB/FT	Depth Set	Hole Size	Cementing Record	Amount Pulled
20.00"	94# H-40	308'	26.00"	See Attached	8 Bbls Circ. Cement
13.375"	68#/61# K-55	3622'	17.50"		37 Bbls Circ. Cement
9.625"	40#, K-55	3390' to 5783'	12.25"		15 Bbls Circ. Cement
7.000"	26# S-95	9043'	8.75"		18 Bbls Circ. Cement

24. LINER RECORD

Size	Top	Bottom	Sacks Cement	Screen	Size	Depth Set	Packer Set
9.625"	3390'	5783'	800	N/A	3.50"	7982'	7982'

26. Perforation Record (Interval, size and number):

See Attached

27. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

Depth Interval Amount and Kind of Material Used
See Attached See Attached

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28. PRODUCTION

Date First Production: **Never** Production Method (Flowing, gas lift, pumping-size and type of pump): **Injection Well.** Well Status (shut-in): **Injection**

Date of Test: N/A	Hours Tested: N/A	Choke Size: N/A	Prod'n For Test Period: N/A	Oil-Bbl N/A	Gas-MCF N/A	Water-Bbl N/A	Gas-Oil Ratio N/A
Flow. Tubing Press: N/A	Casing Pressure: N/A	Calculated 24 HR Rate: N/A	Oil-Bbl N/A	Gas-MCF N/A	Water-Bbl N/A	Oil Gravity-API N/A	

29. Disposition of Gas (Sold, used for fuel, vented, etc):

Test Witnessed By:

30. List of Attachments:
Cementing, Perforation, Stimulation Records

31. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

Signed:

William F. Clark

WILLIAM F. CLARK

Title: OPERATIONS MANAGER

Date:

4/11/90

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INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southwestern New Mexico

T. Anhy	T. Canton . . .
T. Salt	T. Strawn . . .
B. Salt	T. Atoka . . .
T. Yates	T. Miss
T. 7 Rivers	T. Devonian . .
T. Queen	T. Silurian . .
T. Grayburg	T. Montoya . .
T. San Andres . . .	T. Simpson . .
T. Glorieta	T. McKee . . .
T. Paddock	T. Ellenburger
T. Blinebry	T. Gr. Wash . .
T. Tubb	T. Delaware Sand
T. Drinkard	T. Bone Springs
T. Abo	T.
T. Wolfcamp	T.
T. Penn	T.
T. Cisco (Bough C) .	T.

Northwestern New Mexico

T. Ojo Alamo	T. Penn B
T. Kirtland-Fruitland	T. Penn C
T. Pictured Cliffs	T. Penn D
T. Cliff House	T. Leadville
T. Menefee	T. Madison
T. Point Lookout	T. Elbert
T. Mancos	T. McCracken
T. Gallup	T. Ignacio Otzte . .
Base Greenhorn	T. Granite
T. Dakota	T.
T. Morrison	T.
T. Todilto	T.
T. Entrada	T.
T. Wingate	T.
T. Chinle	T.
T. Permian	T.
T. Penn A	T.

OIL OR GAS SANDS OR ZONES

No. 1, fromto.....	No. 3, fromto.....
No. 2, fromto.....	No. 4, fromto.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, fromto..... feet	No. 2, fromto..... feet
No. 2, fromto..... feet	No. 3, fromto..... feet

LITHOLOGY RECORD(Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology	From	To	Thickness in Feet	Lithology
2215'	2320'	Ojo Alamo	Sandstone, Siltstone, Shale			300'	San Jose
						1232'	Animas
						2215'	Ojo Alamo
						2320'	Kirtland
						2980'	Fruitland
2980'	3270'	Fruitland	Coal, Shale, Sandstone, Siltstone			3270'	Pictured Cliffs
						3405'	Lewis
						4880'	Cliff House
						5270'	Menefee
						5520'	Point Lookout
3270'	3405'	Pictured Cliffs	Sanstone			5940'	Mancos
						7438'	Dakota
						7860'	Burro Canyon
4880'	5940'	Mesa Verde	Sandstone, Shale, Coal			7962'	Morrison
						8505'	Bluff
						8735'	Todilto
						8777'	Entrada
7438'	7860'	Dakota	Sandstone, Siltstone				
7962'	8505'	Morrison	Sandstone				
8505'	8735'	Bluff	Sandstone				
8777'		Entrada	Sandstone				

NO DRILL STEM TEST.

**Northeast Blanco Unit #502
Well Completion Log Detail**

Cementing Record

Size	Weight	Grade	Set @ Depth
20.0"	94#	H-40	308'

Cemented with 476 sx (663cf) Class B
Circulated 8 bbls to surface.

13.375"	63# & 68#	K-55	3622'
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Cemented lead with 1735 sx (2943 cf) of Class
B POX MIX and tail with 200 sx (236 cf) of
Class B Neat.

Plug down at 3:00 a.m., 11-27-89 Circulate 37
bbls to the surface.

9.625"	40#	K-55	3390' - 5783'
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Cemented lead with 600 sx (1090 cf) of Class
G lite and tail with 200 sx (230 cf) of Class
G neat.

Plug down at 8:30 p.m., 12-2-89. Fill annulus
with 375 bbls and reverse out 15 bbls good
cement.

7.0"	26#	S-95	9043'
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Stage I: Cemented with 275 sx (346 cf) of
Class G 50/50 POZ and tail with 250 sx (300
cf) of Class G + 35% D-66. Circulate out 18
barrels of cement.

Stage II: Cemented with 375 sx (607 cf) of
Class G 65/35 POZ and tail with 125 sx (148
cf) Class G + 0.8% D-60.

Plug down at 6:30 p.m., 12-24-89.

Perforation Record:

Entrada: 0.38" holes at: 8786', 8790', 9794', 8806', 8810',
1-7-90 8814', 8818', 8822', 8826', 8830', 8846', 8859',
8870', 8879', 8887', 8899'.

Bluff: 0.42" holes at: 8514', 8518', 8522', 8526', 8530',
1-12-90 8534', 8538', 8545', 8550', 8554', 8558', 8562',
8568', 8572', 8576', 8580', 8592', 8596', 8600',
8604', 8608', 8612', 8616', 8620', 8627', 8634'.

Lower Morrison: 1-16-90 0.42" holes at: 8300', 8304', 8307', 8344', 8348', 8352', 8356', 8360', 8410', 8413', 8417', 8421', 8437', 8440, 8444', 8452', 8456', 8460'.

Upper Morrison: 1-18-90 0.42" holes at 8064', 8068', 8072', 8076', 8080', 8084', 8099', 8103', 8107', 8111', 8211', 8215', 8223', 8235', 8256', 8260'.

Stimulation:

Entrada: 1-8-90 Acid break-down of Entrada perforations from 8786' to 8899'. Pump 2 bbls water the 500 gal. (12 bbls) 7-1/2% HCl at 3 BPM at 0 psig. The pumped 86 bbls of water as flush. Break-down formation with 3450 psig at 1 BPM, before acid on perfs - 2000 psig at 2.5 BPM, after acid on perf - 1000 psig at 3 BPM.

Entrada: 1-10-90 Treatment summary: Pumped a total of 85,848 gal. 40# gel and 29,106 gal. of slickwater and 100,500# of 20/40 mesh sand. Average treatment: 33.3 bbls @ 2900 psi. ISIP - 1000 psi. 15 minute shut in - 800 psig. Job complete at 1:30 a.m., 1-10-90. Shut in 6 hours for gel to break.

Bluff: 1-13-90 Acidize Bluff formation perfs from 8514' to 8634'. Break-down formation with 2200 psi; establish rate of 20 BPM at 5000 psig, pump 1500 gal. 7-1/2% HCl and 45 1.3 s.g. RCN ball sealers. Acid on formation at 7 BPM @ 2200 psig; good ball action. Pressure up quickly to 6400 psig. Pressure climbed up to 5970 psi. Surge pressure again, pressure stabilized at 5600 psi. Surge balls off, pump acid away @ 1400 psi. and 5 BPM. ISIP = 1400, bled down to 0 in 15 minutes. Rig down Smith Energy.

Bluff: 1-13-90 Treatment summary: Pumped a total of 113,000 gal. of 40# gel, 157,000# 20/40 Brady sand; 35,000 gal. 40# linear gel pad, 13,692 gal. slickwater, 1%. Average treatment psi 2600, rate 58 BPM; ISIP - 1790. 5 minutes - 1750; 10 minutes - 1610. Shut in 4 hours for gel to break. The hydraulics on the blender went out, had to cut job short by 100,000# sand. Job complete at 6:00 a.m., 1-13-90.

Bluff: 1-15-90 Treatment summary: 63,589 gal. of 40# linear gel, 140,000# 20/40 Brady sand, 20,000 gal. 1% KCl water. Average treatment - 59 BPM at 2850 psig. ISIP - 2200 psig, 15 minute shut in - 2000. Job completed

12:00 noon 1-14-89. Shut well in for 6 hrs for gel to break; 1100 psig.

Lower
Morrison:
1-16-90

Acidize and frac the Lower Morrison perforations from 8300' to 8460'. Establish injection rate of 36 bbls at 4600 psi. Break-down pressure at 3200 psi. Acidize with 1500 gal. of 7-1/2% HCl and 30 1.3 s.g. 7/8" RCN ball sealers. Pump acid at 9 BPM. Increase to 19 BPM at end of flush. Fair ball action. Pressure up to 5000 psi. Bleed off slowly. Surge ball sealers off perforations. Bleed off pressure.

Lower
Morrison:
1-16-90

Treatment summary: Pumped a total of 88,000 gal. of 40# gel and 3100 gal. 1% as flush. Did not complete flush. 100,000# 20/40 sand. Calculated sand in formation 76,000#. Average treatment: 3300 psi @ 38 BPM. ISIP = N/A. Screened out, 15 minutes @ 2000 psi. Screen off at 5400 psi. Unable to pump schedule, short 13,310 gal. gel and 79,000# 20/40 sand. Job complete at 11:55 a.m. on 1-16-90.

Upper
Morrison:
1-16-90

Acidize the Upper Morrison with 1500 gal. of 7-1/2% HCl NS 32 RCN 1.3 s.g. ball sealers. No break-down pressure, establish rate of 20 BPM @ 5400 psig then pump acid and balls at 8 BPM @ 3000 psig. Flush at 10 BPM @ 3500 psig; good ball action. Ball off at 5400 psig.

Upper
Morrison:
1-18-90

Treatment summary: All water is from Navajo Lake, 1% KCl added. Pumped a total of 17,100 gal. of slickwater, 15,000 gal. 40# linear gel pad, 68,000 gal. 40# linear gel frac fluid, and 6,972 gal. slickwater flush. 135,300# 20/40 mesh sand. Average treating pressure 3500 psi @ 38 BPM. Screened formation off leaving 21,000# 20/40 sand in pipe and 5,988 gal. flush. No ISIP. 15 minutes - 3800 psig. Shut well in for 4 hours for gel to break. Job complete 1:42 p.m., 1-18-90.