Form 3160-5 \*(December 1989)

## UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

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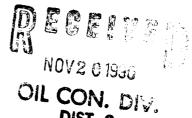
Lease Designation & Serial #:

Do	not use th	SUNDRY 1 is form for prop Use "AP	r. 6.	6. If Indian, Allottee/Tribe Name	
		<del></del>	SUBMIT IN TRIPLICATE	——  <sup>7.</sup>	If Unit or CA, Agmt. Design.:
1.	Type of We	ell: oil	well gas well X other	8.	Well Name and No.:
2.	Name of Op	erator:	Blackwood & Michols Co., A Limited Partnership		N.E.B.U.# 488
3.	Address of	Operator:	P.O. Box 1237, Durango, CO / 81302-1237	9.	API Well No.:

30-045-27708 4. Location of Well: (Footage, Sec., T., R., M., or Survey Description) 10. Field & Pool/Expltry Area: 1410' FSL, 790' FWL - Section 24, T31N, R7W Basin Fruitland Coal 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 Abandonment Change of Plans Notice of Intent Recompletion **New Construction** Plugging Back Non-Routine Fracturing X Subsequent Report Casing Repair Water Shut-Off Altering Casing Conversion to Injection Final Abandonment Notice X Other: COMPLETION (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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



14. I hereby certify that the foregoing is true and correct.			OIL CON. DIV.		
Signed: _	RW William	ROY W. WILLIAMS	Title: ADMINISTRATIVE MANAGER Date: 1//6/90		
	(This space for Federal or State	office use)	ACCEPTED FOR RECORD		
	Approved ByConditions of approval, if any:		NOV 1 6 1990		
		(MACCO	FARMINGTON RESOURCE AREA		
			D		

<sup>13.</sup> 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.)\*

Completion Report

Northeast Blanco Unit No. 488 - Basin Fruitland Coal

LOCATION: 1410' FSL, 790' FWL Section 24, T31N, R7W San Juan County, New Mexico

10-13-90 7" casing at 3020'.

Picking up BHA.

Move in and rig up Big "A" Rig No. 23. Nipple up BOP, blooie lines, manifold and relief lines.

Pressure test blind rams and casing to 2000 psi for 30 minutes - held OK.

TIH with Smith 6-1/4" FDTL RR bit, SN# KD4892 (jets: 20-20-20), bit sub, float sub, one 4-3/4" drill collar, N nipple (1.875" ID), nine 4-3/4" drill collars, 1 jt drill pipe, and F nipple (2.25" ID). OAL - 337.07'.

10-14-90 7" casing at 3020'; open hole 3020-3260'.

Drilling Fruitland coal at 3260' with 5 BPM water, 8000# WOB, and 80 RPM @ 400 psi. Have 8' flare from one blooie line.

Pick up 3-1/2" drill pipe, TIH.

Tag float at 2978'. Pressure test pipe rams, HCR valves, and check manifold to 2000 psi for 30 minutes - held OK.

Drill float, cement, shoe at 3020', and formation.

10-15-90 7" casing at 3020'; open hole 3020-3345'.

Circulating and working pipe at TD with 1/2 BPM water. Returns moderate 1/8" and less coal (95%), shale and silt-stone in gray to clear water. Making floating coal dust.

(Cont'd)
10-15-90 Drill Fruitland coal formation 3260-3345'.

Coal	Intervals:	3047-3048'	1'
		3090 <b>-</b> 3092 <b>'</b>	2 '
		3110-3117'	71
		3129-3135'	6'
		3151-3152'	1'
		3158-3160'	2 '
		3170-3180'	10'
		3183-3185'	2 '
		3188-3200 <b>'</b>	12'
		3203-3205	2 1
		3214-3215'	1'
		3217-3221'	4 '
		3223-3225'	2 '
		3234-3236'	2'
		3327-3330'	3'
		3332-3333'	1'
		3334-3342'	8 1
		Total	66'

Top P.C. Tongue - 3239'
Top Main P.C. - 3343'
Total Depth - 3345'

Circulate well with 5 BPM water.

Circulate and work pipe at TD with 5 BPM water through 1 blooie line, reducing pump rate 1/2 BPM every 2 hours. Have 10' flare.

10-16-90 7" casing at 3020'; open hole 3020-3345'.

Circulating and working pipe at TD with 1 MM air and 3 BPM water. Returns moderate 1/8" and smaller coal (98%) in black water.

Increase pump rate from 1/2 to 5 BPM, bring one air compressor on line while circulating and working pipe at TD.

Circulate and work pipe at TD with 1 MM air and 5 BPM water, reducing pump rate 1/2 BPM every 2 hours. Returns moderate 3/4" and smaller coal (98%) in clear water.

Circulate and work pipe at TD with 2 MM air and 1/2 BPM water. Hole fell in, pipe became stuck. Work pipe free in 6 hours. Well unloaded heavy 1" and smaller coal (95%), shale and siltstone in black viscous water with heavy floating coal dust.

(Cont'd)

10-16-90 Circulate and work pipe at TD with 3 BPM water to clean up well.

Circulate and work pipe at TD with 1 MM air and 3 BPM water. Estimated 500 MCFD.

10-17-90 7" casing at 3020'; open hole 3020-3345'.

Circulating and working pipe at TD with 2 MM air and 1/2 BPM water, alternating 10 and 15 Bbl water sweeps hourly. Returns heavy on sweeps 1/2" and smaller coal (98%) in black water.

Circulate and work pipe at TD with 1 MM air and 3 BPM water, reducing pump rate 1/2 Bbl per hour.

Circulate and work pipe at TD with 1 MM air and 1/2 BPM water. Returns moderate to heavy; hole bridging and unloading 1-1/2" and smaller coal in black viscous to gray water.

Circulate and work pipe at TD with 2 MM air and 1/2 BPM water, alternating 10 and 15 Bbl water sweeps hourly.

Have 20' flare.

10-18-90 7" casing at 3020'; open hole 3020-3345'.

Circulating and working pipe at TD with 3 MM air and 1-1/2 BPM water.

Circulate and work pipe at TD with 2 MM air and 1-1/2 BPM water with 10-15 Bbl water sweeps hourly. Returns heavy 1-1/2" and smaller coal (98%) in black water. Hole is tight and sticky.

Circulate and work pipe at TD with 2 MM air and 1-1/2 BPM water. Returns 1/2" and smaller coal (98%) in gray water. Hole unloads heavy 1" and smaller coal about every 2 hours.

Circulate and work pipe at TD with 2 MM air and 3 BPM water. Returns same as above.

Circulate and work pipe at TD with 3 MM air and 1-1/2 BPM water. Returns 1/8" and smaller coal (98%) in gray to clear water. Hole unloads heavy 1" and smaller coal about every 2 hours.

10-19-90 7" casing at 3020'; open hole 3020-3345'.

Circulating and working pipe at TD with 4 MM air and 1/2 BPM water with 10 Bbl water sweeps hourly.

Circulate and work pipe at TD with 3 MM air and 1 BPM water. Returns light 1/4" and smaller coal (98%). Hole unloads approximately every 2 hours heavy 1" and smaller coal in black water. Hole tight and sticky.

Circulate and work pipe at TD with 4 MM air and 1/2 BPM water with 5 Bbl water sweeps hourly. Returns 1/4" and smaller coal (98%) in clear to gray water. Hole unloads approximately every 2 hours 1" and smaller coal in black water.

Circulate and work pipe at TD with 4 MM air and 1/2 BPM water with 10 Bbl water sweeps hourly. Returns light 1/4" and smaller coal (98%) in clear water. Hole unloads moderate to heavy 3/4" and less coal every 3-4 hours.

Well making 2200 BPD water.

10-20-90 7" casing at 3020'; open hole 3020-3345'.

Circulating and working pipe at 3184-3216' with 4 MM air and 1 BPM water.

Circulate and work pipe at TD with 4 MM air and 1/2 BPM water. Returns moderate 1/8" and smaller coal (98%) in clear to gray water.

Lay down 10 jts drill pipe for pitot test #1: 1/4 hr - 35 psi, 4205 MCFD; 1/2 hr - 34 psi, 4116; 3/4 hr - 33 psi, 4026; 1 hr - 50 psi, 5548 MCFD (all gauges wet).

Shut in test #1: 1/4 hr - 460 psi; 1/2 hr - 625; 3/4 hr - 760 psi 1 hr - 800 psi. Release well through choke slowly.

Tag fill at 3140', wash and work pipe with 4 MM air and 3 BPM water to 3216'. Pipe became stuck. Hole unloads moderate to heavy 1/4" and smaller coal in black water. Pipe came free.

Circulate and work pipe at 3184-3216' with 4 MM air and 5 BPM reducing to to 1 BPM water with 10-20 Bbl water sweeps hourly. Hole falls in and unloads heavy 1" and smaller coal in black water with heavy floating coal; otherwise returns are light 1/4" and smaller coal.

10-21-90 7" casing at 3020'; open hole 3020-3345'.

Circulating and working pipe at 3216-3233' with 5 BPM water.

Circulate and work pipe at 3184-3216' with 4 MM air and 1 BPM water with 10 Bbl water sweeps every 1/2 hour. Hole falls in approximately each 1-1/2 hours.

Well unloads heavy 1" coal in black water then clears up to moderate to light 1/8" and larger coal in gray water. Hole is tight and drags.

Circulate and work pipe at 3184-3233' with 5 BPM water through 1 blooie line. Returns moderate to heavy 1/4" coal in gray water. Hole tight from 3216-3233'.

Circulate and work pipe from 3216-3233' with 1 MM air and 3 BPM water. Returns heavy 1/2" and smaller coal in black water. Hole fell in at 3223', had to lay down 1 jt drill pipe.

Circulate and work pipe at 3216-3233' with 5 BPM water. Returns light 1/8" and smaller coal in clear water. Hole falls in and unloads heavy 1/2" and smaller coal in black water.

10-22-90 7" casing at 3020'; open hole 3020-3345'.

Circulating and working pipe from 3216-3248' with 5 BPM water.

Circulate and work pipe from 3216-3279' with 5 BPM water through 1 blooie line. Returns moderate to heavy 1/2" and smaller coal (98%) in gray to black water. Hole tight with 20-30,000# drag.

Lay down 7 jts 3-1/2" drill pipe, change stripping head rubber. Run pitot test #2: 1/4 hr - 70 psi, 7337 MCFD; 1/2 hr - 60 psi, 6442; 3/4 hr - 65 psi, 6889 MCFD (all gauges wet).

Tag fill at 3216'.

Circulate and work pipe from 3216-3248' with 5 BPM water. Returns moderate 1/8" and smaller coal (98%) in gray water. Hole unloads heavy 3/4" and smaller coal and powder coal in black water.

10-23-90 7" casing at 3020'; open hole 3020-3345'.

Circulating and working pipe at 3184-3233' with 2-1/2 BPM water.

Circulate and work pipe at 3216-3248' with 5 BPM water. Returns light 1/8" and smaller coal (98%) in clear water. Hole tight with heavy drag from 3233-3248'.

Circulate and work pipe from 3216-3233' with 3 BPM water holding 200 psi on backside, stuck pipe at 3233'. Pull 50,000# over string weight, release pressure on backside, pipe came free.

Circulate and work pipe from 3216-3233' with 4 MM air and 5 BPM water. Unloaded heavy 1/2" and less coal (50%) and shale, stuck pipe at 3233', shut air off, pipe came free.

Circulate and work pipe from 3216-3233' with 1 MM air and 5 BPM water; add another 1 MM air. Returns moderate to light 1/4" and smaller in gray water, stuck pipe. Hole started unloading heavy 3/4" and less coal in black water. Shut air off, held 300 psi on backside, pipe came free.

Circulate and work pipe at 3184-3216' with 5 BPM water. Returns moderate to light 1/4" and less coal (98%) in clear water. Hole heads up and unloads heavy 3/4" and smaller coal (98%) in black water.

Circulate and work pipe at 3184-3233' with 2-1/2 BPM water. Hole tight 3216-3233'. Returns moderate to light 1/4" and smaller coal (98%) in gray water. Hole bridged and unloaded heavy 1" coal and floating coal dust for 2 hours.

10-24-90 7" casing at 3020'; open hole 3020-3345'.

Circulating and working pipe at 3226-3250' with 1-1/2 BPM water.

Circulate and work pipe at 3216-3248' with 2-1/2 to 3 BPM water. Returns moderate 1/4" and smaller coal (98%) in gray water. Hole tight and sticky from 3233-3248', stuck pipe. Pressure up backside to 300 psi, pipe came free. Pull up to 3188' - hole unloaded heavy 1/2" coal in black water.

Circulate and work pipe from 3188-3248' with 3 to 4 BPM water. Returns light 1/4" and smaller coal (98%) in gray water.

(Cont'd)

10-24-90 Pull 7 jts drill pipe, let well blow 1 hour. TIH, tag fill at 3226'. Hole unloading heavy 1/8" and smaller coal in black water.

Circulate and work pipe 3226-3250' with 1-1/2 to 2 BPM water. Returns moderate to light 1/4" and smaller in gray water. Hole gets tight and sticky every 1-2 hours. Hole unloads heavy 3/4" coal when hole gets sticky.

10-25-90 7" casing at 3020'; open hole 3020-3345'.

Circulating and working pipe 3216-3236' with 4 MM air and 2-1/2 BPM water.

Circulate and work pipe 3226-3233' with 2 BPM water. Hole tight and sticky. Returns moderate to heavy 1/4" and smaller coal (98%) in gray water.

Circulate and work pipe 3216-3248' with 2 MM air and 2-3 BPM water. Hole falls in and unloads heavy to moderate 1/4" coal in black water.

Circulate and work pipe 3184-3248' with 4 MM air and 3 BPM water. Hole falls in and unloads heavy 1/2" and smaller coal and coal powder; lost 50' hole, pull 7 jts drill pipe, work through bridge at 3216'.

Circulate and work pipe 3216-3236' with 4 MM air and 2-1/2 BPM water. Returns heavy 1/2" and smaller coal with heavy floating coal powder in black water.

10-26-90 7" casing at 3020'; open hole 3020-3345'.

Pumping 1-1/2 BPM water with well shut in; reaming at 3233'.

Circulate and work pipe 3216-3248' with 4 MM air and 2-1/2 BPM water. Hole tight and sticky from 3233-3248'. Returns heavy 1/2" and less coal (98%), shale and siltstone in black water.

Pull 7 jts 3-1/2" drill pipe and unplug coal in pit side blooie line.

Circulate with 2-1/2 BPM water and 4 MM air 3184-3216'. Well bridging and unloading, hole tight and sticky.

Remove air compressors from well. Shut in well and pump down drill pipe with 6 BPM water to kill well.

(Cont'd)

10-26-90 Well dead. Pump 1-1/2 BPM water down drill pipe with well shut in. Wash and ream from 3184-3216'. Hole very tight from 3233-3248' in PC tongue.

10-27-90 7" casing at 3020'; open hole 3020-3345'.

Waiting on daylight to snub drill collars out of hole.

Wash and ream pumping 1-1/2 BPM water down drill pipe from 3216-3240' with well shut in.

Short trip to 7" casing. TIH, tag bridge at 3121'. 10,000# on bridge; went through bridge, tag fill at 3216'. Pumping across stack with 200-250 psig back pressure.

TOH, lay down 3-1/2" drill pipe.

Nipple down rig, BOP, and stripping bowl. Nipple up snubbing stack. Rig up Cudd. Pressure test stack to 2000 psig for 30 minutes - held OK. Wait on daylight to snub.

10-28-90 Rigging down to move.

Wait on daylight to snub drill collars out of hole.

Snub drill collars out of hole, change out rams to 2-7/8" and rig up to snub tubing. Snub and strip 95 jts (2983.99') 2-7/8" 6.5# J-55 FBNAU USS tubing. Set at 2995.99' with Baker F nipple (2.25" ID) at 2963.27'. Ran expendable check on bottom.

Land tubing in tubing head. Rig down Cudd, nipple up upper tree. Drop ball, pump check off, flow well up tubing. Rig down.