

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

at  
C

GARREY CARRUTHERS  
GOVERNOR

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

August 17, 1990

Blackwood & Nichols Co., Ltd.  
P.O. Box 1237  
Durango, CO 81302-1237

Attention: Al Rector

**RECEIVED**  
AUG 21 1990  
OIL CON. DIV.  
DIST. 3

*Administrative Order DD-40*

Dear Mr. Rector:

By Administrative Order NSL-2604, as amended, the Division granted Blackwood and Nichols Co., Ltd. authority to drill the Northeast Blanco Unit Well No. 423 at an unorthodox coal gas well location 655 feet from the North line and 740 feet from the East line (Unit A) of Section 8, Township 30 North, Range 7 West, NMPM, Basin-Fruitland Coal Gas Pool, Rio Arriba County, New Mexico.

It is now our understanding, by your application dated July 13, 1990, that Blackwood & Nichols Co., Ltd. is seeking to drill a replacement well for the No. 423 well due to low production resulting from undesirable completion techniques for this area. The replacement well, Northeast Blanco Unit No. 423-R is to be directionally drilled from a surface location in the NW/4 SE/4 (Unit J) of said Section 8 to a bottomhole location in the NE/4 of said Section 8 which underlies the Sims Mesa State Park.

The Division Director Finds That:

- (1) The application has been duly filed under the provisions of Rule 111(c), (d) and (e) of the Division General Rules and Regulations;
- (2) The dedicated acreage for this well is within the applicant's Northeast Blanco Unit and there are no other offsetting operators to notify;
- (3) The applicant has presented satisfactory evidence that all requirements prescribed in General Rule 111 will be met; and

- (4) No objections have been received within the waiting period prescribed by said rule.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, Blackwood & Nichols Co., Ltd., is hereby authorized to directionally drill its Northeast Blanco Unit Well No. 423-R, the surface location of which shall be 2380 feet from the South line and 1790 feet from the East line (Unit J) of Section 8, Township 30 North, Range 7 West, NMPM, Rio Arriba County, New Mexico, by kicking off from the vertical at a depth of approximately 460 feet, and drilling in such a manner as to bottom in the Basin-Fruitland Coal Gas Pool at a standard coal gas well location within the NE/4 of said Section 8.

**PROVIDED HOWEVER THAT** prior to commencing directional drilling operations into said wellbore, the applicant shall establish the location of the kick-off point by means of a directional survey acceptable to the Division.

**PROVIDED FURTHER THAT** during or upon completion of directional drilling operations, the applicant shall conduct an accurate wellbore survey from the kick-off point to total depth in order that the subsurface bottomhole location, as well as the wellbore's true depth and course, may be determined.

(2) The applicant shall notify the supervisor of the Aztec district office of the Division of the date and time said wellbore surveys are to be conducted so that they may be witnessed. The applicant shall further provide a copy of said wellbore surveys to the Santa Fe and Aztec offices of the Division upon completion.

(3) Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true vertical depth in addition to measured depths.

(4) The existing standard 320-acre gas spacing and proration unit comprising the E/2 of said Section 8 shall be dedicated to the replacement well.

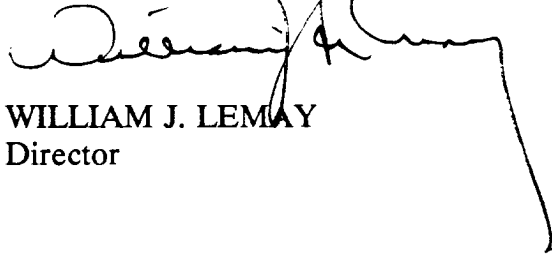
**HOWEVER**, should the No. 423-R well be placed on production, the Northeast Blanco Unit Well No. 423 shall cease production from the subject pool, whereby it will either be converted to a pressure observation well or plugged and abandoned.

(5) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

*Administrative Order DD-40*  
*Blackwood & Nichols Co., Ltd.*  
*August 17, 1990*  
*Page No. 3*

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read 'William J. Lemay', is written over the printed name and title. The signature is fluid and cursive, with a long, sweeping line extending from the end of the name.

WILLIAM J. LEMAY  
Director

S E A L

cc: Oil Conservation Division - Aztec  
US Bureau of Land Management - Farmington  
US Bureau of Reclamation - Durango  
NM Parks & Recreation Division - Santa Fe  
NM Parks & Recreation Division - Sims Mesa State Park



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
AZTEC DISTRICT OFFICE

GARREY CARRUTHERS  
GOVERNOR

1100 RIO BRAZOS ROAD  
AZTEC, NEW MEXICO 87410  
(505) 334-0178

Date: 8-25-90

*Mike Stogner*

Oil Conservation Division  
P.O. Box 2088  
Santa Fe, NM 87504-2088

Re: Proposed MC \_\_\_\_\_  
Proposed DHC \_\_\_\_\_  
Proposed NSL X \_\_\_\_\_  
Proposed SWD \_\_\_\_\_  
Proposed WFX \_\_\_\_\_  
Proposed PMX \_\_\_\_\_

Gentlemen: DD

I have examined the application dated 7-16-90  
for the Blackwood & Nichols N.E.B.U. # 423R  
Operator Lease & Well No.

J-8-30N-7W and my recommendations are as follows:  
Unit, S-T-R

Approved  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Yours truly,

Emile Busch

BLACKWOOD & NICHOLS CO., LTD.

P.O. BOX 1237

DURANGO, COLORADO 81302-1237

(303) 247-0728

**RECEIVED**

JUL 16 1990

**OIL CON. DIV.**  
**DIST. 3**

July 13, 1990

Mr. William LeMay  
New Mexico Oil Conservation Division  
P. O. Box 2088  
Sante Fe, New Mexico 87401

Re: NEBU #423R Fruitland Coal Well  
2380'/S, 1790'/E  
Section 8, T30N, R7W  
Rio Arriba County, New Mexico  
Request for administrative approval  
1. Non-standard surface location and  
2. directionally deviated well bore

Dear Mr. Le May:

Blackwood & Nichols requests administrative approval of an exception to the footage requirements of Rule 7, R-8768 for the surface location of the referenced well. Administrative approval is also requested, as allowed in Rule 9, R-8768, for a directionally deviated wellbore which would bottom within the standard NE proration Unit boundaries.

Blackwood & Nichols proposes to redrill the NEBU #423 presently located in the Sims Marina Campground. The referenced replacement well, the NEBU #423R, will be located outside the campground and will be directionally drilled to the East half proration unit.

The NEBU #423 was drilled through the Fruitland Coal to TD with a weighted mud, a long string of 5-1/2 inch casing run to TD and cemented in place. The well was then perforated and sand-gel water fracture stimulated. A nineteen day compressor assisted flow test averaged 125 MCFPD and 210 BPDW.

The NEBU #423 was drilled in an area where open hole completed wells have gauged as high as 22.9 MMCFPD. There is a very high possibility that the NEBU #423R will likewise gauge in excess of 10 MMCFD.

The well plan for the NEBU #423R is to set 10-3/4 inch surface at 400 feet and at approximately 460 feet start a directional well bore at an angle build rate of approximately 7°/100 feet due North

OCD  
Page 2  
July 9, 1990

to a 45° angle. The 45° angle will be held for a sufficient distance to allow a 3°/100 feet drop angle to return the well bore to vertical just above the uppermost Fruitland Coal stringer. The bottom of the hole will have a 1500 feet horizontal displacement and a True Vertical Depth of 2940 feet.

Seven and five eighths inch, 29.70#/foot casing will be run to TD and cemented back to surface. The drilling rig will then be moved off and a completion rig moved on.

The completion rig will drill through the coal and complete the well using the open hole completion method. A 5-1/2 inch pre-perforated and plugged liner will be run through the coal section. However if hole conditions dictate the liner may not be run and the well produced from the open hole.

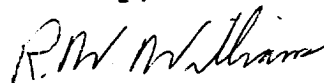
A well bore of this design will allow an increased drainage radius and also allow an open hole completion of an area underlying sensitive surface restrictions (New Mexico State Parks campgrounds).

The bottom of the well will be displaced approximately 1500 feet due North of the surface location and fall within the proration unit at 1400' ( $\pm 100'$ ), FNL, 1750' ( $\pm 100'$ ) FEL. The bottom of the well is planned to be orthodox and this bottom hole location would provide the best drainage for this area of the NEBU.

The NEBU #423 will either be plugged and abandoned or converted to a pressure observation well depending upon partner approval.

Please review this request and if you have any questions please contact our Operations Engineer, Al Rector at (303) 247-0728. Your prompt attention to this application is greatly appreciated.

Sincerely,



Roy W. Williams  
Administrative Manager

AR:ams

cc: Aztec OCD Office

# OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

## DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

## DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## WELL LOCATION AND ACREAGE DEDICATION PLAT

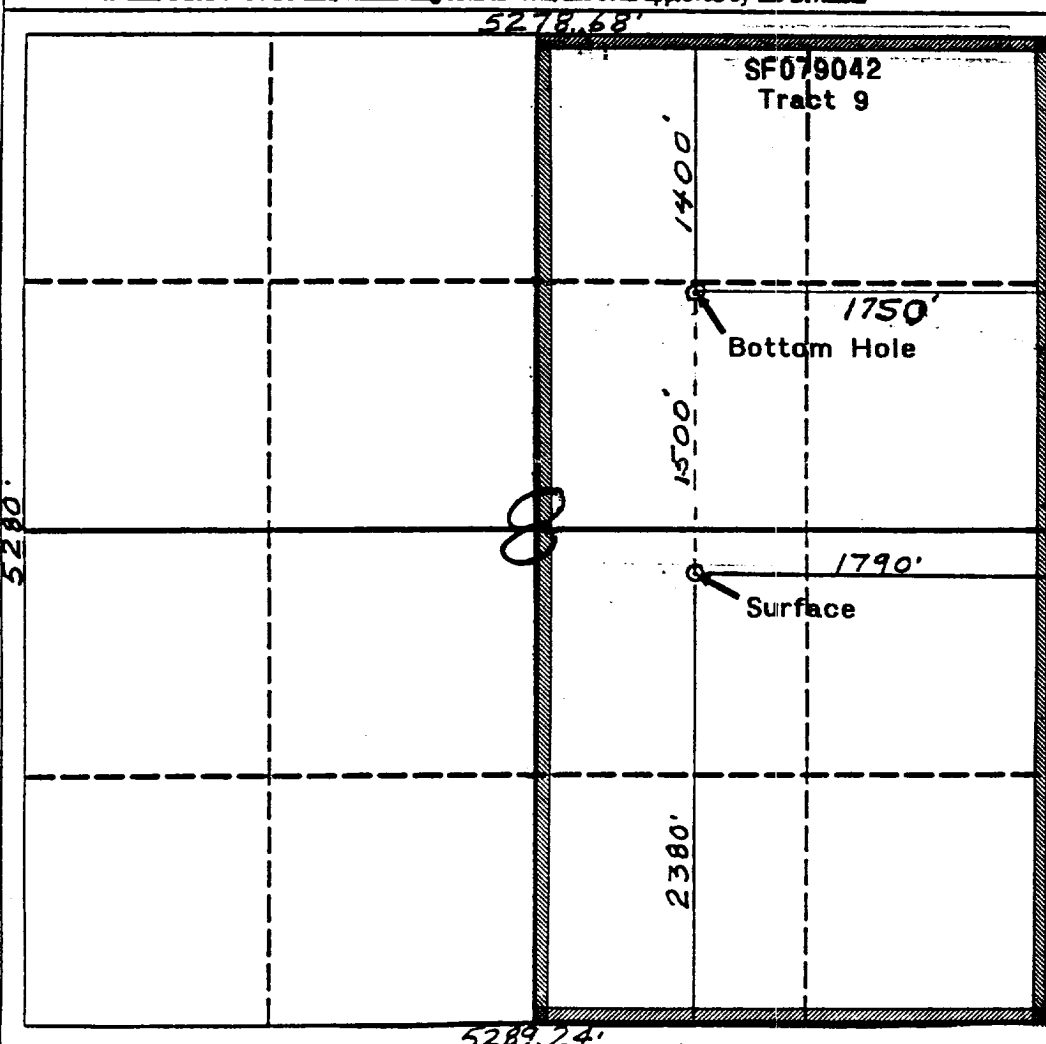
All Distances must be from the outer boundaries of the section

Operator <b>Blackwood &amp; Nichols Co., LTD.</b>		Lease <b>North East Blanco Unit</b>		Well No. <b>423-R</b>
Unit Ledger <b>J</b>	Section <b>8</b>	Township <b>30 North</b>	Range <b>7 West</b>	County <b>Rio Arriba</b>
Actual Footage Location of Well: Bottom Hole: 1400' FNL - 1750' FEL				
Surface: 2380 feet from the South line and 1790 feet from the East line				
Ground level Elev. <b>6262'</b>	Producing Formation <b>Fruitland Coal</b>	Pool <b>Basin Fruitland Coal</b>	Dedicated Acreage: <b>320 Acres</b>	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?

☒ Yes ☐ No If answer is "yes" type of consolidation Unitization  
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



### OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature  
*William F. Clark*

Printed Name  
**William F. Clark**

Position  
**Operations Manager**

Company  
**Blackwood & Nichols Co., LTD**

Date  
**10 July 1990**

### SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

5-26-90

Date Surveyed  
*Neale Edwards*

Signature  
*Neale Edwards*

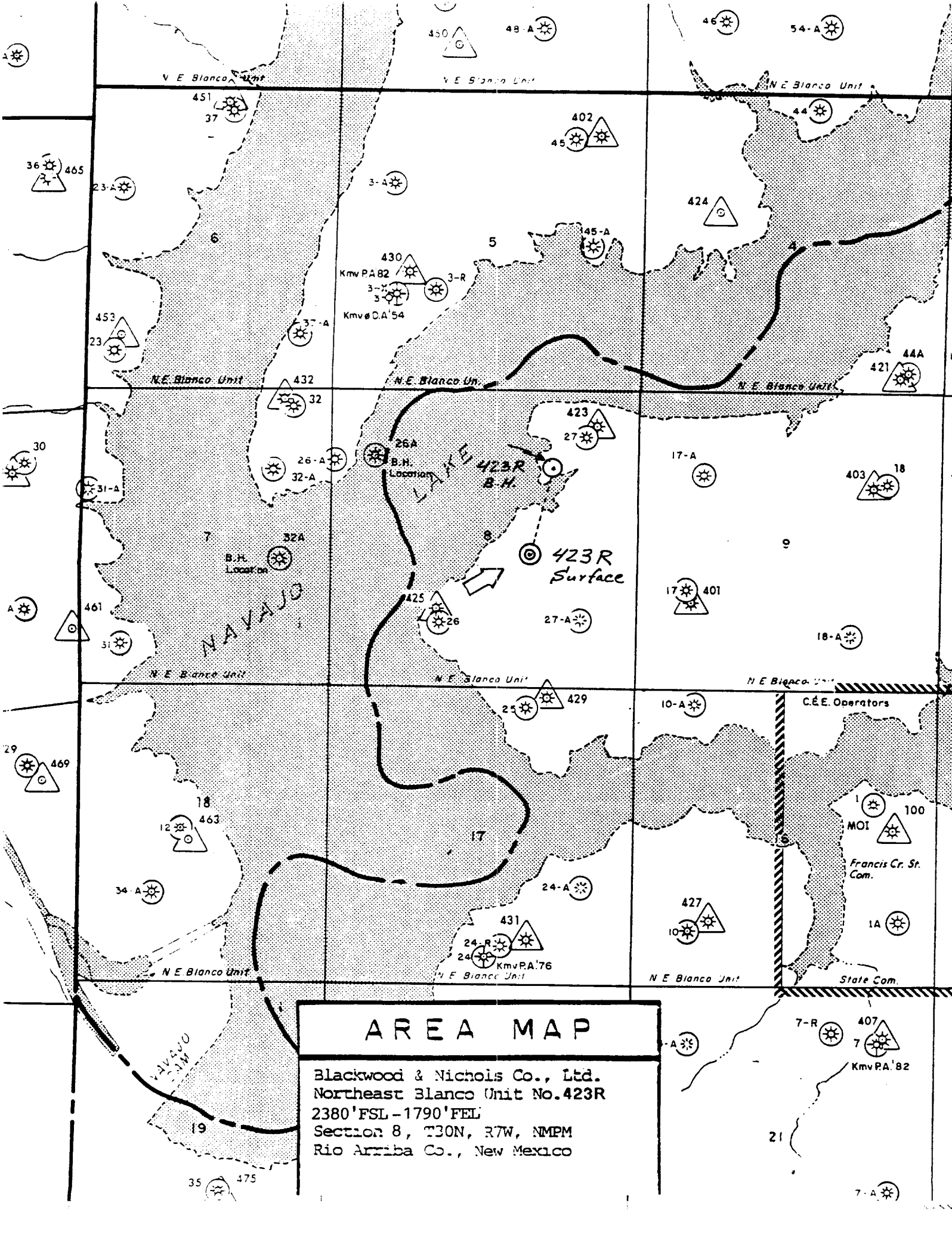
Professional Surveyor  
**NEW MEXICO**

**6857**

Certificate No.  
**6857**

Neale Edwards

0 330 660 990 1320 1650 1980 2310 2640 2970 3300 3630 3960 4290 4620 4950 5280 5610 5940 6270 6600 6930 7260 7590 7920 8250 8580 8910 9240 9570 9900 10230 10560 10890 11220 11550 11880 12210 12540 12870 13200 13530 13860 14190 14520 14850 15180 15510 15840 16170 16500 16830 17160 17490 17820 18150 18480 18810 19140 19470 19800 20130 20460 20790 21120 21450 21780 22110 22440 22770 23100 23430 23760 24090 24420 24750 25080 25410 25740 26070 26400 26730 27060 27390 27720 28050 28380 28710 29040 29370 29700 30030 30360 30690 31020 31350 31680 32010 32340 32670 33000 33330 33660 33990 34320 34650 34980 35310 35640 35970 36300 36630 36960 37290 37620 37950 38280 38610 38940 39270 39600 39930 40260 40590 40920 41250 41580 41910 42240 42570 42900 43230 43560 43890 44220 44550 44880 45210 45540 45870 46200 46530 46860 47190 47520 47850 48180 48510 48840 49170 49500 49830 50160 50490 50820 51150 51480 51810 52140 52470 52800 53130 53460 53790 54120 54450 54780 55110 55440 55770 56100 56430 56760 57090 57420 57750 58080 58410 58740 59070 59400 59730 60060 60390 60720 61050 61380 61710 62040 62370 62700 63030 63360 63690 64020 64350 64680 65010 65340 65670 66000 66330 66660 66990 67320 67650 67980 68310 68640 68970 69300 69630 69960 70290 70620 70950 71280 71610 71940 72270 72600 72930 73260 73590 73920 74250 74580 74910 75240 75570 75900 76230 76560 76890 77220 77550 77880 78210 78540 78870 79200 79530 79860 80190 80520 80850 81180 81510 81840 82170 82500 82830 83160 83490 83820 84150 84480 84810 85140 85470 85800 86130 86460 86790 87120 87450 87780 88110 88440 88770 89100 89430 89760 90090 90420 90750 91080 91410 91740 92070 92400 92730 93060 93390 93720 94050 94380 94710 95040 95370 95700 96030 96360 96690 97020 97350 97680 98010 98340 98670 99000 99330 99660 99990 100320 100650 100980 101310 101640 101970 102300 102630 102960 103290 103620 103950 104280 104610 104940 105270 105600 105930 106260 106590 106920 107250 107580 107910 108240 108570 108900 109230 109560 109890 110220 110550 110880 111210 111540 111870 112200 112530 112860 113190 113520 113850 114180 114510 114840 115170 115500 115830 116160 116490 116820 117150 117480 117810 118140 118470 118800 119130 119460 119790 120120 120450 120780 121110 121440 121770 122100 122430 122760 123090 123420 123750 124080 124410 124740 125070 125400 125730 126060 126390 126720 127050 127380 127710 128040 128370 128700 129030 129360 129690 130020 130350 130680 131010 131340 131670 132000 132330 132660 132990 133320 133650 133980 134310 134640 134970 135300 135630 135960 136290 136620 136950 137280 137610 137940 138270 138600 138930 139260 139590 139920 140250 140580 140910 141240 141570 141900 142230 142560 142890 143220 143550 143880 144210 144540 144870 145200 145530 145860 146190 146520 146850 147180 147510 147840 148170 148500 148830 149160 149490 149820 150150 150480 150810 151140 151470 151800 152130 152460 152790 153120 153450 153780 154110 154440 154770 155100 155430 155760 156090 156420 156750 157080 157410 157740 158070 158400 158730 159060 159390 159720 160050 160380 160710 161040 161370 161700 162030 162360 162690 163020 163350 163680 164010 164340 164670 165000 165330 165660 165990 166320 166650 166980 167310 167640 167970 168300 168630 168960 169290 169620 169950 170280 170610 170940 171270 171600 171930 172260 172590 172920 173250 173580 173910 174240 174570 174900 175230 175560 175890 176220 176550 176880 177210 177540 177870 178200 178530 178860 179190 179520 179850 180180 180510 180840 181170 181500 181830 182160 182490 182820 183150 183480 183810 184140 184470 184800 185130 185460 185790 186120 186450 186780 187110 187440 187770 188100 188430 188760 189090 189420 189750 190080 190410 190740 191070 191400 191730 192060 192390 192720 193050 193380 193710 194040 194370 194700 195030 195360 195690 196020 196350 196680 197010 197340 197670 198000 198330 198660 198990 199320 199650 199980 200310 200640 200970 201300 201630 201960 202290 202620 202950 203280 203610 203940 204270 204600 204930 205260 205590 205920 206250 206580 206910 207240 207570 207900 208230 208560 208890 209220 209550 209880 210210 210540 210870 211200 211530 211860 212190 212520 212850 213180 213510 213840 214170 214500 214830 215160 215490 215820 216150 216480 216810 217140 217470 217800 218130 218460 218790 219120 219450 219780 220110 220440 220770 221100 221430 221760 222090 222420 222750 223080 223410 223740 224070 224400 224730 225060 225390 225720 226050 226380 226710 227040 227370 227700 228030 228360 228690 229020 229350 229680 230010 230340 230670 231000 231330 231660 231990 232320 232650 232980 233310 233640 233970 234300 234630 234960 235290 235620 235950 236280 236610 236940 237270 237600 237930 238260 238590 238920 239250 239580 239910 240240 240570 240900 241230 241560 241890 242220 242550 242880 243210 243540 243870 244200 244530 244860 245190 245520 245850 246180 246510 246840 247170 247500 247830 248160 248490 248820 249150 249480 249810 250140 250470 250800 251130 251460 251790 252120 252450 252780 253110 253440 253770 254100 254430 254760 255090 255420 255750 256080 256410 256740 257070 257400 257730 258060 258390 258720 259050 259380 259710 260040 260370 260700 261030 261360 261690 262020 262350 262680 263010 263340 263670 264000 264330 264660 264990 265320 265650 265980 266310 266640 266970 267300 267630 267960 268290 268620 268950 269280 269610 269940 270270 270600 270930 271260 271590 271920 272250 272580 272910 273240 273570 273900 274230 274560 274890 275220 275550 275880 276210 276540 276870 277200 277530 277860 278190 278520 278850 279180 279510 279840 280170 280500 280830 281160 281490 281820 282150 282480 282810 283140 283470 283800 284130 284460 284790 285120 285450 285780 286110 286440 286770 287100 287430 287760 288090 288420 288750 289080 289410 289740 290070 290400 290730 291060 291390 291720 292050 292380 292710 293040 293370 293700 294030 294360 294690 295020 295350 295680 296010 296340 296670 297000 297330 297660 297990 298320 298650 298980 299310 299640 299970 300300 300630 300960 301290 301620 301950 302280 302610 302940 303270 303600 303930 304260 304590 304920 305250 305580 305910 306240 306570 306900 307230 307560 307890 308220 308550 308880 309210 309540 309870 310200 310530 310860 311190 311520 311850 312180 312510 312840 313170 313500 313830 314160 314490 314820 315150 315480 315810 316140 316470 316800 317130 317460 317790 318120 318450 318780 319110 319440 319770 320100 320430 320760 321090 321420 321750 322080 322410 322740 323070 323400 323730 324060 324390 324720 325050 325380 325710 326040 326370 326700 327030 327360 327690 328020 328350 328680 329010 329340 329670 330000 330330 330660 330990 331320 331650 331980 332310 332640 332970 333300 333630 333960 334290 334620 334950 335280 335610 335940 336270 336600 336930 337260 337590 337920 338250 338580 338910 339240 339570 339900 340230 340560 340890 341220 341550 341880 342210 342540 342870 343200 343530 343860 344190 344520 344850 345180 345510 345840 346170 346500 346830 347160 347490 347820 348150 348480 348810 349140 349470 349800 350130 350460 350790 351120 351450 351780 352110 352440 352770 353100 353430 353760 354090 354420 354750 355080 355410 355740 356070 356400 356730 357060 357390 357720 358050 358380 358710 359040 359370 359700 360030 360360 360690 361020 361350 361680 362010 362340 362670 363000 363330 363660 363990 364320 364650 364980 365310 365640 365970 366300 366630 366960 367290 367620 367950 368280 368610 368940 369270 369600 369930 370260 370590 370920 371250 371580 371910 372240 372570 372900 373230 373560 373890 374220 374550 374880 375210 375540 375870 376200 376530 376860 377190 377520 377850 378180 378510 378840 379170 379500 379830 380160 380490 380820 381150 381480 381810 382140 382470 382800 383130 383460 383790 384120 384450 384780 385110 385440 385770 386100 386430 386760 387090 387420 387750 388080 388410 388740 389070 389400 389730 390060 390390 390720 391050 391380 391710 392040 392370 392700 393030 393360 393690 394020 394350 394680 395010 395340 395670 396000 396330 396660 396990 397320 397650 397980 398310 398640 398970 399300 399630 399960 400290 400620 400950 401280 401610 401940 402270 402600 402930 403260 403590 403920 404250 404580 404910 405240 405570 405900 406230 406560 406890 407220 407550 407880 408210 408540 408870 409200 409530 409860 410190 410520 410850 411180 411510 411840 412170 412500 412830 413160 413490 413820 414150 414480 414810 415140 415470 415800 416130 416460 416790 417120 417450 417780 418110 418440 418770 419100 419430 419760 420090 420420 420750 421080 421410 421740 422070 422400 422730 423060 423390 423720 424050 424380 424710 425040 425370 425700 426030 426360 426690 427020 427350 427680 428010 428340 428670 429000 429330 429660 429990 430320 430650 430980 431310 431640 431970 432300 432630 432960 433290 433620 433950 434280 434610 434940 435270 435600 435930 436260 436590 436920 437250 437580 437910 438240 438570 438900 439230 439560 439890 440220 440550 440880 441210 441540 441870 442200 442530 442860 443190 443520 443850 444180 444510 444840 445170 445500 445830 446160 446490 446820 447150 447480 447810 448140 448470 448800 449130 449460 449790 450120 450450 450780 451110 451440 451770 452100 452430 452760 453090 453420 453750 454080 454410 454740 455070 455400 455730 456060 456390 456720 457050 457380 457710 458040 458370 458700 459030 459360 459690 460020 460350 460680 461010 461340 461670 462000 462330 462660 462990 463320 463650 463980 464310 464640 464970 465300 465630 465960 466290 466620 466950 467280 467610 467940 468270 468600 468930 469260 469590 469920 470250 470580 470910 471240 471570 471900 472230 472560 472890 473220 473550 473880 474210 474540 474870 475200 475530 475860 476190 476520 476850 477180 477510 477840 478170 478500 478830 479160 479490 479820 480150 480480 480810 481140 481470 481800 482130 482460 482790 483120 483450 483780 484110 484440 484770 485100 485430 485760 486090 486420 486750 487080 487410 487740 488070 488400 488730 489060 489390 489720 490050 490380 490710 491040 491370 491700 492030 492360 492690 493020 493350 493680 4940



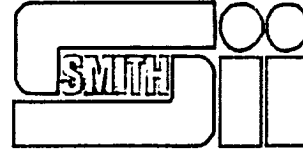
**AREA MAP**

Blackwood & Nichols Co., Ltd.  
Northeast Blanco Unit No. 423R  
2380' FSL - 1790' FEL  
Section 8, T30N, R7W, NMPM  
Rio Arriba Co., New Mexico



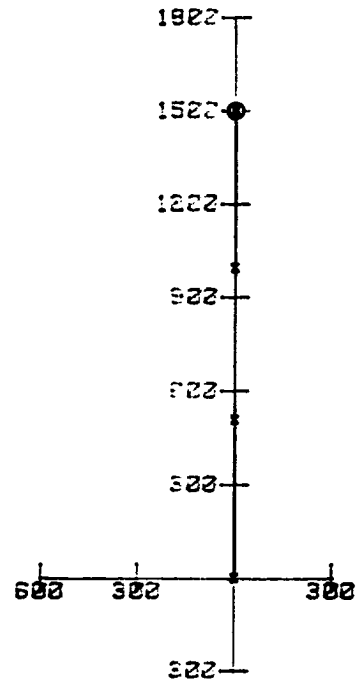
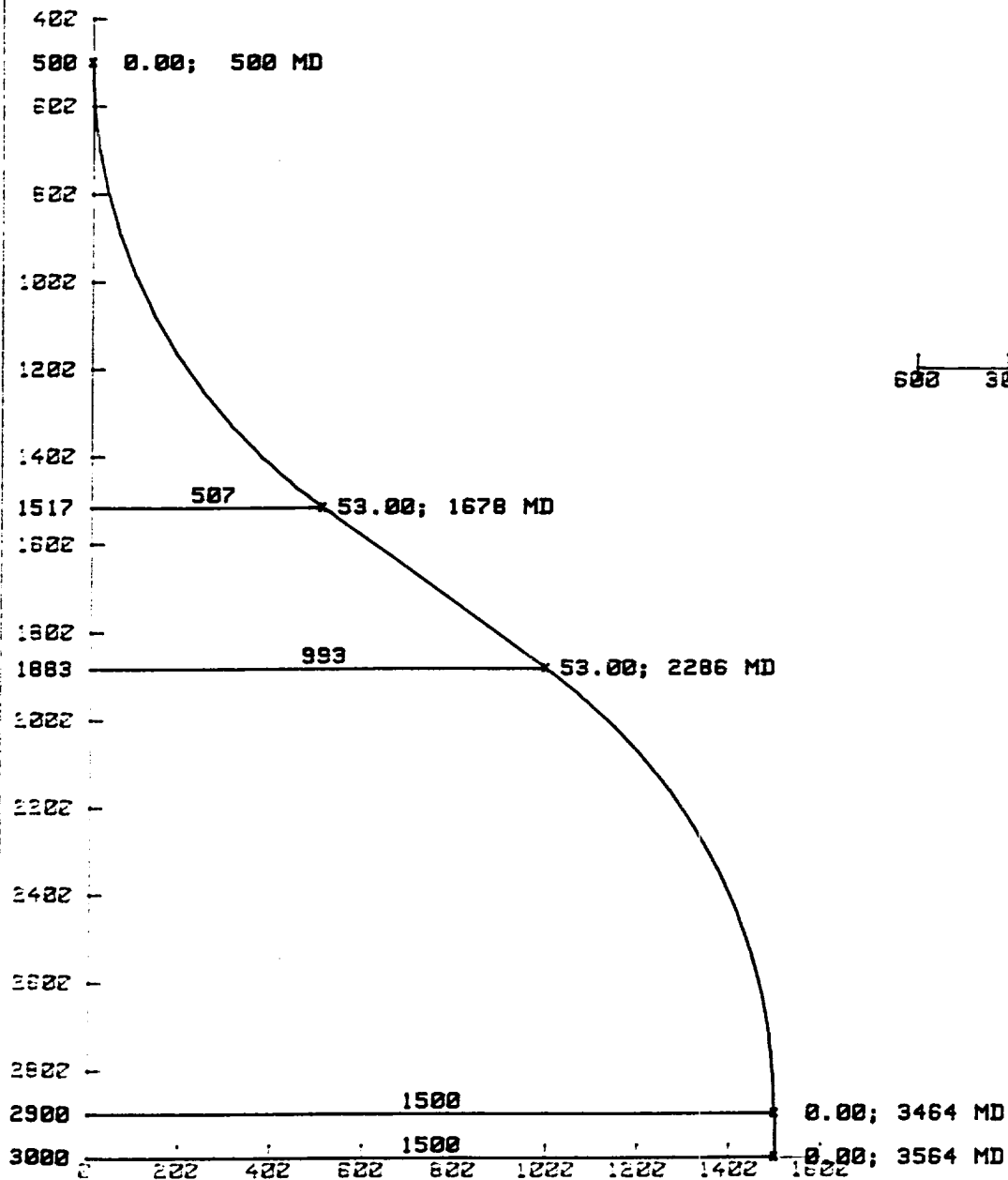
16 APR 1990 @ 11:55

BLACKWOOD AND NICHOLS  
SAN JUAN PROJECT  
SECTION 8-T30N-R7W  
NEW MEXICO



VERTICAL PLAN  
SCALE: 200 FEET/DIVISION

HORIZONTAL PLAN  
SCALE: 300 FEET/DIVISION



VERTICAL SECTION PLANE: 0.22 DEGREES