

OK (C)

I call 875 W. 15005
799 W. 14023
R-9304
DD-

BLACKWOOD & NICHOLS CO., LTD.

P.O. BOX 1237
DURANGO, COLORADO 81302-1237

(303) 247-0728

RECEIVED
DEC 10 1990
OIL CON. DIV.
DIST. 3

December 7, 1990

New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

Re: Northeast Blanco Unit #461
Surface: Unit I, Sec. 12, T30N, R8W
Bottom Hole: Sec. 7, T30N, R7W
San Juan County, New Mexico

Gentlemen:

This is to certify the following deviation tests were run while drilling the above well:

140' - 1/4°
300' - 1°

Very truly yours,

R. W. Williams

Roy W. Williams
Administrative Manager

RWW:avd

County of: La Plata
State of: Colorado

Signature: *Elizabeth Boyd*

Elizabeth Boyd
Notary Public
Commission Expires 8-10-91

12-7-90

Date
484 Turner Drive
Durango, Colorado 81301

TELECO OILFIELD SERVICES
SURVEY CALCULATIONS

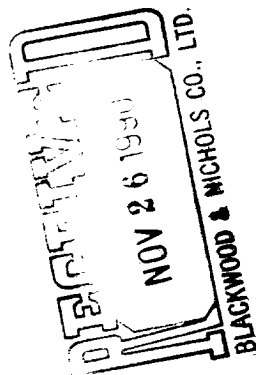
Company: BLACKWOOD & NICHOLS
Well: N/E BLANCO # 461
Location: SAN JUAN NEW MEXICO
Sig: BIG A # 23

ELECO Job # TRM-335
Grid Correction: 0.0°
Magnetic Declination: 12.5°
Total grid correction: 12.5°
Proposed Direction: 90.0°

We hereby certify that the
surveys contained herein are to
the best of our knowledge a true
and accurate account of the well



FIELD SUPERVISOR



MINIMUM CURVATURE CALCULATION

Leas	Depth	Length	Incl	Course	True	Vertical	Coordinates	Closure	Dog Leg
feet	feet	deg	deg	deg	feet	feet	N/S	Distance	Severity
feet	feet	deg	deg	deg	feet	feet	feet	feet	deg/100'
375	0	0.5	135.0	375.00	0.02	0.01N	0.02E	0.02	0.00
406	31	1.8	122.2	405.99	0.53	0.35S	0.53E	0.63	4.25
466	60	4.1	115.9	465.91	3.25	1.78S	3.25E	3.71	3.87
525	59	6.2	107.9	524.67	8.18	3.69S	8.18E	8.97	3.75
585	60	9.5	102.9	584.10	16.09	5.79S	16.09E	17.10	5.61

INITIAL TIE IN COORDINATES

TELECO SURVEYS

Company: BLACKWOOD & NICHOLS, Well: N/E BLANCO # 461, Location: SAN JUAN NEW MEXICO, Rig: BIG A # 23

Meas Depth feet	Length feet	Incl deg	Azi deg	True Vert. feet	Dp. feet	Vertical Section feet	N/S feet	Coordinates E/W feet	Distance feet	Closure Angle deg	Dog Leg Severity deg/100
644	59	11.4	97.6	642.12		26.62	7.65S	26.62E	27.70	S 73.98E	3.61
705	61	13.8	93.4	701.65		39.86	8.87S	39.86E	40.84	S 77.45E	4.21
766	61	17.7	89.5	760.35		56.40	9.22S	56.40E	57.15	S 80.71E	6.62
828	62	19.3	87.4	819.14		76.07	8.68S	76.07E	76.56	S 83.49E	2.80
891	63	20.6	87.4	878.36		97.54	7.70S	97.54E	97.84	S 85.48E	2.06
954	63	24.3	87.7	936.58		121.57	6.68S	121.57E	121.75	S 86.86E	5.88
1013	59	27.5	88.1	989.64		147.32	5.74S	147.32E	147.43	S 87.77E	5.43
1075	62	32.3	90.5	1043.38		178.21	5.41S	178.21E	178.29	S 88.26E	7.98
1138	63	35.7	92.0	1095.60		213.42	6.20S	213.42E	213.51	S 88.34E	5.56
1198	60	39.0	92.3	1143.29		249.79	7.57S	249.79E	249.91	S 88.26E	5.51
1261	63	41.9	92.7	1191.23		290.62	9.35S	290.62E	290.77	S 88.16E	4.62
1361	100	46.1	92.7	1263.14		360.00	12.63S	360.00E	360.22	S 87.99E	4.20
1422	61	48.0	93.4	1304.70		404.58	15.01S	404.58E	404.86	S 87.88E	3.23
1485	63	48.4	91.6	1346.70		451.50	17.05S	451.50E	451.82	S 87.84E	2.22

Company: BLACKWOOD & NICHOLS, Well: N/E BLANCO # 461, Location: SAN JUAN NEW MEXICO, Rig: BIG A # 23

Leas Depth feet	Length feet	Incl deg	Course deg	Azi deg	True Vert. feet	Dp. feet	Vertical Section feet	N/S feet	Coordinates E/W feet	Distance feet	Closure Angle deg	Dog Leg Severity deg/100
547	62	48.8	90.2	1387.70	498.00			17.78S	498.00E	498.31	S 87.96E	1.81
610	63	49.6	88.8	1428.87	545.68			17.36S	545.68E	545.96	S 88.18E	2.11
669	59	49.6	87.0	1467.11	590.58			15.71S	590.58E	590.79	S 88.48E	2.32
732	63	49.2	85.6	1508.11	638.31			12.63S	638.31E	638.44	S 88.87E	1.80
792	60	49.0	84.9	1547.39	683.51			8.87S	683.51E	683.56	S 89.26E	0.94
856	64	49.1	84.9	1589.34	731.65			4.58S	731.65E	731.67	S 89.64E	0.16
918	62	48.6	84.6	1630.14	778.14			0.31S	778.14E	778.14	S 89.98E	0.88
981	63	48.3	86.0	1671.92	825.13			3.56N	825.13E	825.14	N 89.75E	1.73
1043	62	48.6	84.6	1713.05	871.37			7.36N	871.37E	871.40	N 89.52E	1.76
1106	63	48.2	84.2	1754.87	918.26			11.96N	918.26E	918.33	N 89.25E	0.79
1167	61	47.6	83.9	1795.77	963.27			16.65N	963.27E	963.42	N 89.01E	1.05
1228	61	45.7	85.6	1837.64	1007.44			20.72N	1007.44E	1007.65	N 88.82E	3.72
1290	62	43.5	88.1	1881.79	1050.89			23.13N	1050.89E	1051.15	N 88.74E	4.54

Company: BLACKWOOD & NICHOLS, Well: N/E BLANCO # 461, Location: SAN JUAN NEW MEXICO, Rig: BIG A # 23

Meas Depth feet	Length feet	Incl deg	Azi deg	True Vert. feet	Dp. feet	Vertical Section feet	N/S feet	Coordinates E/W feet	Distance feet	Closure Angle deg	Dog Leg Severity deg/100
2352	62	43.8	87.7	1926.65	1093.66	1093.66	24.70N	1093.66E	1093.94	N 88.71E	0.66
2414	62	43.7	87.7	1971.44	1136.50	1136.50	26.42N	1136.50E	1136.81	N 88.67E	0.16
2477	63	43.0	88.0	2017.25	1179.72	1179.72	28.04N	1179.72E	1180.05	N 88.64E	1.16
2538	61	43.5	91.6	2061.69	1221.50	1221.50	28.18N	1221.50E	1221.82	N 88.68E	4.13
2600	62	42.3	92.0	2107.10	1263.68	1263.68	26.86N	1263.68E	1263.97	N 88.78E	1.98
2662	62	40.1	92.0	2153.75	1304.49	1304.49	25.43N	1304.49E	1304.74	N 88.88E	3.55
2725	63	38.0	90.9	2202.67	1344.17	1344.17	24.42N	1344.17E	1344.39	N 88.96E	3.51
2787	62	36.7	88.1	2251.96	1381.77	1381.77	24.73N	1381.77E	1381.99	N 88.97E	3.45
2849	62	33.5	87.7	2302.68	1417.39	1417.39	26.03N	1417.39E	1417.63	N 88.95E	5.17
2911	62	30.5	87.4	2355.26	1450.21	1450.21	27.43N	1450.21E	1450.47	N 88.92E	4.85
2972	61	27.9	88.1	2408.50	1479.95	1479.95	28.61N	1479.95E	1480.22	N 88.89E	4.30
3034	62	25.0	89.1	2464.00	1507.55	1507.55	29.30N	1507.55E	1507.83	N 88.89E	4.73
3095	61	22.3	89.5	2519.88	1532.02	1532.02	29.60N	1532.01E	1532.30	N 88.89E	4.43

Company: BLACKWOOD & NICHOLS, Well: N/E BLANCO # 461, Location: SAN JUAN NEW MEXICO, Rig: BIG A # 23

Depth feet	Course		True Vert. Dp. feet	Vertical Section feet	Coordinates		Closure		Dog Leg Severity deg/100'
	Length feet	Incl deg			N/S feet	E/W feet	Distance feet	Angle deg	
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
3158	63	19.7	92.3	2578.69	1554.58	29.28N	1554.58E	1554.86	N 88.92E 4.42
3221	63	17.1	91.6	2638.46	1574.45	28.59N	1574.45E	1574.71	N 88.96E 4.14
3283	62	14.4	92.7	2698.13	1591.27	27.98N	1591.27E	1591.51	N 88.99E 4.38
3345	62	11.3	93.0	2758.57	1605.04	27.29N	1605.04E	1605.27	N 89.03E 5.00
3407	62	8.3	92.7	2819.66	1615.58	26.77N	1615.58E	1615.80	N 89.05E 4.84
3469	62	5.8	94.1	2881.18	1623.17	26.33N	1623.17E	1623.39	N 89.07E 4.04
3529	60	2.3	93.7	2941.02	1627.40	26.04N	1627.40E	1627.61	N 89.08E 5.83

PROJECTED BOTTOM HOLE LOCATION

3589	60	0.0	93.7	3001.01	1628.60	25.96N	1628.60E	1628.81	N 89.09E 3.83
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- 830.00

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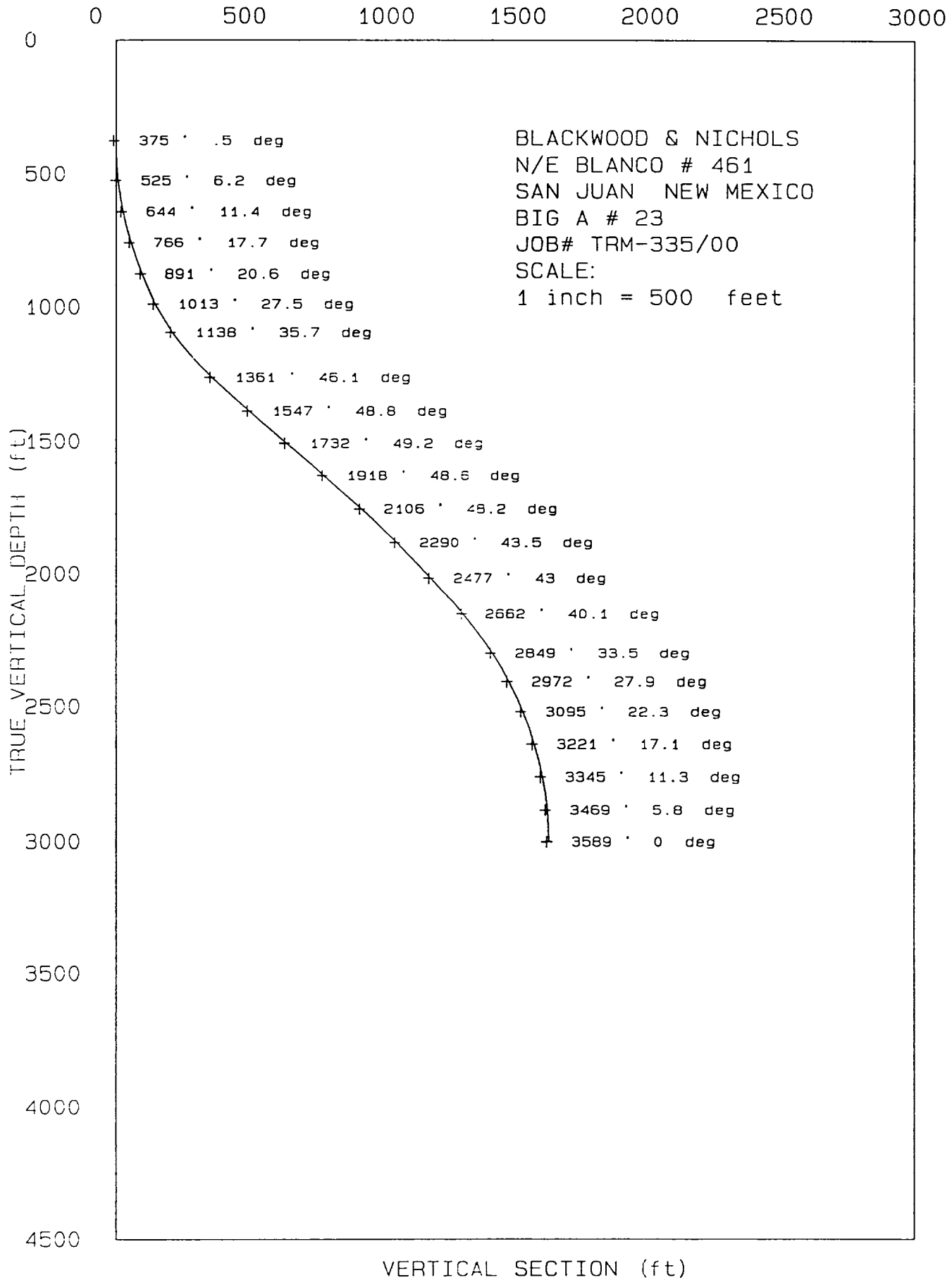
County of: La Plata
State of: Colorado

Signature: *Elizabeth Boyd*

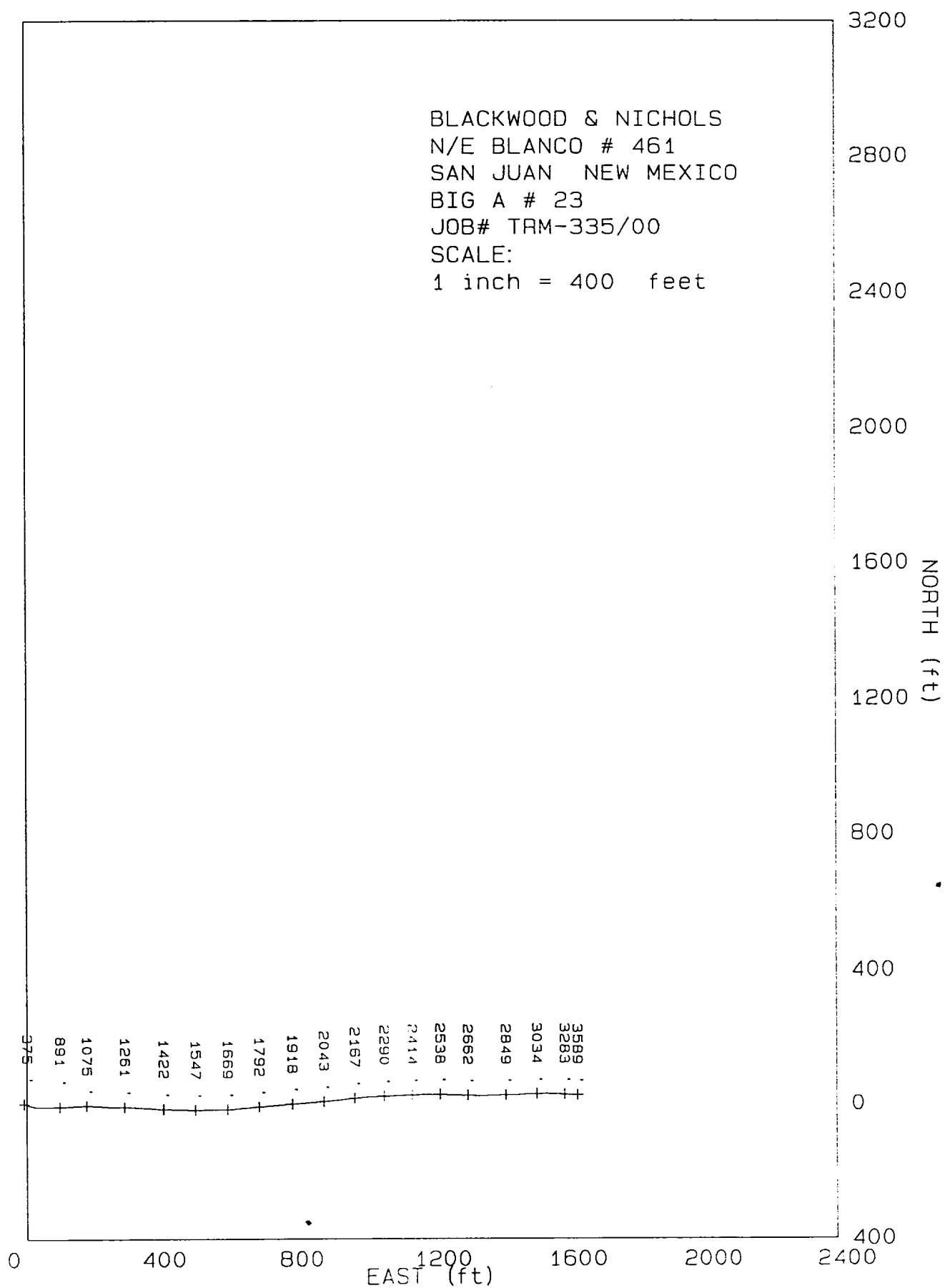
ELIZABETH BOYD
NOTARY PUBLIC
Comm. Expires 8-10-91
12-7-90
DATE
484 Turner Dr.
Durango, CO 81301

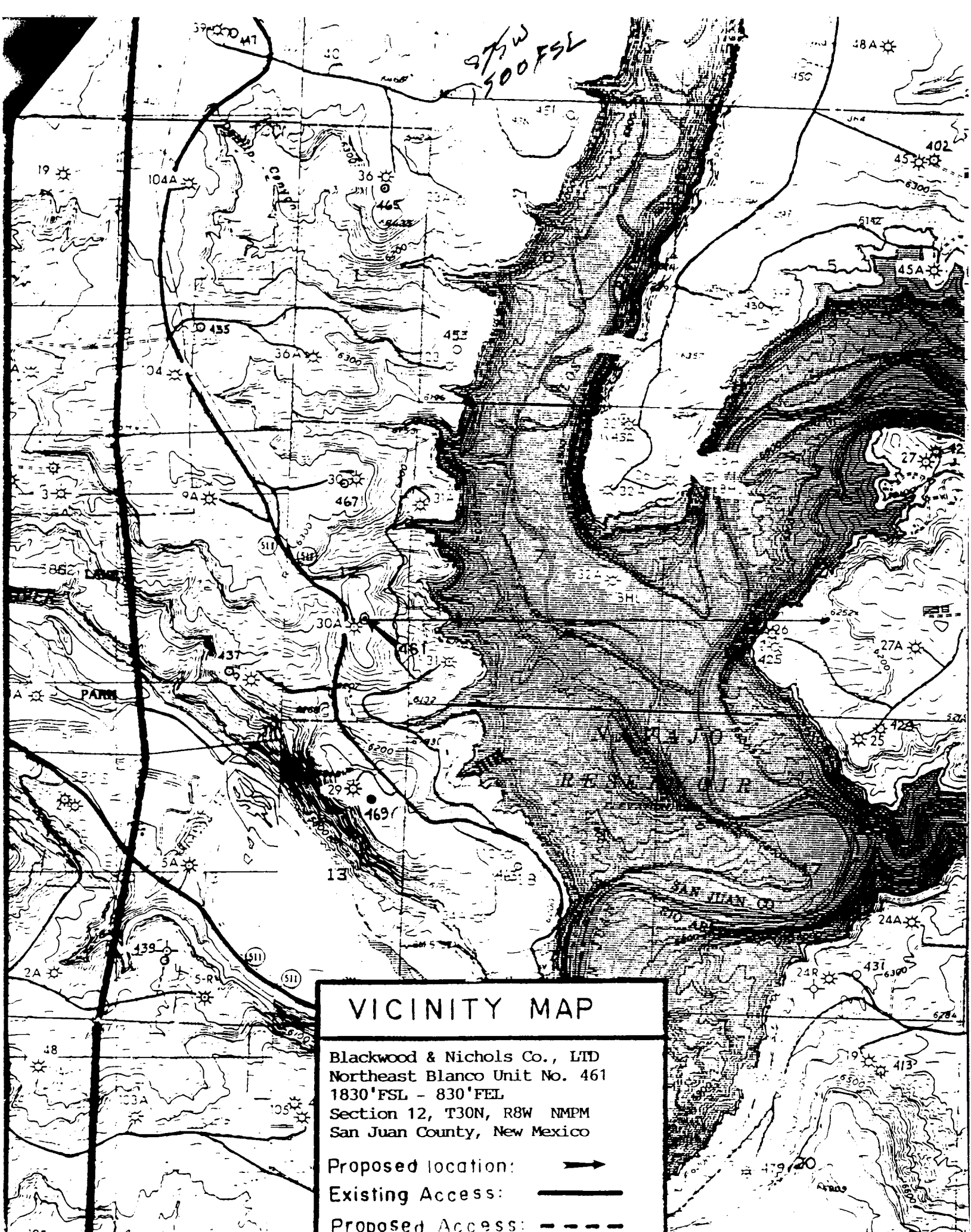
TELECO Oilfield Services

VERTICAL PROJECTION



TELECO Oilfield Services PLAN VIEW





Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Denver CO, Arroyo, NM 88210

DISTRICT III
1000 Rio Arriba Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

RECEIVED

AUG 02 1990

BUREAU OF LAND MANAGEMENT
FARMINGTON RESOURCE AREA

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator		Well No.	
Blackwood & Nichols Co., Ltd.		Northeast Blanco Unit 461	
Unit	Section	Township	Range
I	12	30N	9W
County		San Juan	
Admit Footage Location of Well: Bottom Hole: 1376' FSL - 840' FWL L Sec. 7, T30N, R7W NMPM, San Juan Co., NM			
Surface: 1830		East 830	
Current Level Elev.	Producing Formation	Foot	Described Acreage
6326'	Fruitland Coal	Basin Fruitland Coal	298.90 Acres

- Outline the acreage dedicated to the subject well by colored pencil or machine marks on this plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
Note: See lease dedication on attached page
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been considered by communication, joint-venting, etc.?

☒ Yes ☐ No If answer is "yes" type of consideration Unitization
If answer is "no" list the owners and their descriptions whose have actually been considered. (Use several lines if this form is necessary.)

No alternate will be assigned to the well until all interests have been considered (by communication, joint-venting, or otherwise) or until a non-considerate unit, satisfying 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 R.W. Williams
Printed Name R. W. Williams
Position Administrative Manager
Company Blackwood & Nichols Co., Ltd.

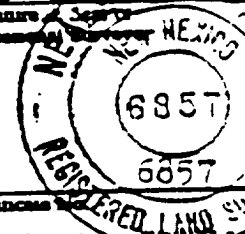
Date 7/30/90

SURVEYOR CERTIFICATION

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

Date Surveyed 7/30/90

Signature of Surveyor [Signature]
Printed Name of Surveyor [Name]



RECEIVED

SEP 11 1990

OIL CON. DIV.
DIST. 3

