McHUGH

Jerome P. McHugh & Associates
Operating Affiliate: Nassau Resources, Inc.
650 South Cherry, Suite 1225
Denver, Colorado 80222
(303) 321-2111 FAX (303) 321-1563

18 January 1990

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504

DD-28

Attn: Mr. Michael Stogner

Dear Mr. Stogner:

Nassau Resources, Inc. hereby requests amendment of Administrative Order DD-28, dated August 23, 1989. This order provided that Nassau could drill a directional well from a surface location of 800' FSL, 1760' FWL to a subsurface location of 1700' FSL, 1300' FWL both in Section 13, T32N, R05W, Rio Arriba County, New Mexico. A subsurface location tolerance of 50' diameter was granted.

Nassau drilled the well to a measured depth of 4350' to a bottomhole location of 1629.84' FSL, 1327.13' FWL. This bottomhole location is within the normal drilling window for a Basin Fruitland Coal well, but is approximately 20' outside the 50' tolerance diameter at total depth.

Nassau requests an amendment to Administrative Order DD-28 to allow the well to be produced at its current bottomhole location.

Nassau has sent registered letters of notification of this application to the offset operators affected, namely Amoco Production and Celeste Grynberg.

Attached please find a copy of the directional drilling companies completion report with diagrams showing the well's bottomhole location and trajectory. This data was verified with a directional electric log.

If you have any questions concerning this request, please advise.

Yours very truly,

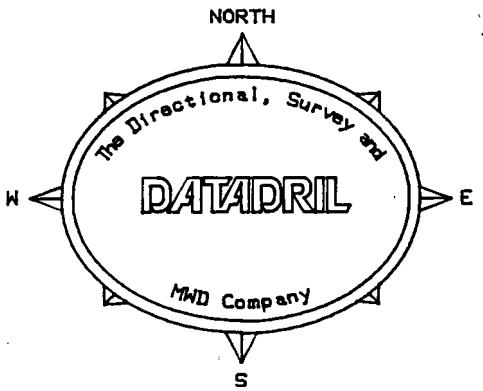
Gary J. Johnson

Gary J. Johnson
Petroleum Engineer

DATADRIL

REPORT
of
DIRECTIONAL COMPLETION

NASSAU RESOURCES
CARRACAS UNIT 13A-14
RIO ARRIBA COUNTY, NEW MEXICO
SECTION 13-T32N-R5W



DRAWN BY; STEPHEN S. DEGRAFFENREID, DIRECTIONAL SUPERVISOR

DATADRIL

NASSAU RESOURCES
CARRACAS UNIT 13A-14
RIO ARRIBA COUNTY, NEW MEXICO
SECTION 13-T32N-R5W
10-9-89

S.I.I. SINGLESHOT
12. DEG. EAST DEC.
913. FT.@ N-27.07-W
K.B.H. = 13 FT.
S.S. DEGRAFFENREID

File Name: NACA13A14S

*** RECORD OF SURVEY ***

Calculated by DATADRIL's CADDS System

Minimum Curvature Method
All Angles are Decimal
Vertical Section Plane: N 27.07 W

TYPE OF SURVEY	MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T DIRECTION (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L RECTANGULAR COORDINATES (FT)		VERTICAL SECTION (FT)	DOGLEG SEVERITY (DEG/100')
MSS	0.00	0.00	N 0.00 E	0.00	0.00	0.00 N	0.00 E	0.00	0.00
7 5/8 SURFACE CSNG. SET @ 286 FT.									
MSS	435.00	.50	N 77.00 E	435.00	434.99	.43 N	1.85 E	-.46	.11
MSS	497.00	.50	N 60.00 E	62.00	496.99	.62 N	2.35 E	-.51	.24
K.O.P. @ 500 FT. 6-1/2 D-500, 1 DEG, B.S.									
MSS	588.00	1.75	N 31.00 W	91.00	587.98	2.01 N	1.98 E	.89	2.01
MSS	680.00	3.75	N 29.00 W	92.00	679.87	5.85 N	.21 W	5.30	2.18
MSS	774.00	6.00	N 22.00 W	94.00	773.52	13.09 N	3.54 W	13.27	2.47
MSS	836.00	7.00	N 22.00 W	62.00	835.12	19.60 N	6.17 W	20.26	1.61
MSS	897.00	8.25	N 25.00 W	61.00	895.58	27.01 N	9.41 W	28.34	2.15
MSS	991.00	9.50	N 29.00 W	94.00	988.45	39.91 N	16.02 W	42.83	1.48
MSS	1083.00	11.00	N 30.00 W	92.00	1078.98	54.15 N	24.09 W	59.18	1.64
MSS	1178.00	12.00	N 29.00 W	95.00	1172.08	70.64 N	33.41 W	78.11	1.07
MSS	1332.00	14.00	N 27.00 W	154.00	1322.12	101.24 N	49.63 W	112.74	1.33
MSS	1426.00	15.25	N 26.00 W	94.00	1413.07	122.49 N	60.21 W	136.47	1.36
PACKED B.H.A. IN @ 1467 FT.									
MSS	1582.00	16.75	N 19.00 W	156.00	1563.04	162.19 N	76.53 W	179.25	1.57
MSS	1737.00	17.25	N 20.00 W	155.00	1711.27	204.90 N	91.66 W	224.17	.37

DATADRIL

NASSAU RESOURCES
CARRACAS UNIT 13A-14

RIO ARRIBA COUNTY, NEW MEXICO
SECTION 13-T32N-R5W

TYPE OF SURVEY	MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T DIRECTION (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L RECTANGULAR COORDINATES (FT)		VERTICAL SECTION (FT)	DOGLEG SEVERITY (DEG/100')
MSS	1891.00	17.25	N 23.00 W	154.00	1858.34	247.38 N	108.39 W	269.60	.58
MSS	2047.00	17.25	N 20.00 W	156.00	2007.33	290.41 N	125.34 W	315.63	.57
MSS	2233.00	18.50	N 17.00 W	186.00	2184.35	344.54 N	143.40 W	372.06	.83
BUMP RUN, 6-1/2 D-500,1-DEG. IN @ 2275 FT.									
MSS	2293.00	18.25	N 20.00 W	60.00	2241.29	362.48 N	149.40 W	390.76	1.63
MSS	2356.00	16.75	N 22.00 W	63.00	2301.38	380.16 N	156.17 W	409.59	2.56
MSS	2386.00	16.25	N 24.00 W	30.00	2330.14	388.01 N	159.50 W	418.09	2.52
PACKED B.H.A. IN @ 2421									
MSS	2484.00	16.00	N 34.00 W	98.00	2424.31	411.74 N	172.63 W	445.19	2.84
MSS	2671.00	16.25	N 31.00 W	187.00	2603.95	455.53 N	200.52 W	496.88	.47
MSS	2858.00	16.00	N 33.00 W	187.00	2783.60	499.57 N	228.03 W	548.62	.33
MSS	3047.00	15.50	N 30.00 W	189.00	2965.50	543.29 N	254.85 W	599.75	.51
MSS	3235.00	15.50	N 32.00 W	188.00	3146.67	586.35 N	280.72 W	649.86	.28
MSS	3390.00	15.75	N 33.00 W	155.00	3295.94	621.55 N	303.15 W	691.42	.24
MSS	3545.00	15.50	N 31.00 W	155.00	3445.21	656.95 N	325.27 W	733.01	.38
MSS	3700.00	15.00	N 34.00 W	155.00	3594.75	691.33 N	347.16 W	773.58	.60
MSS	3857.00	14.75	N 30.00 W	157.00	3746.50	725.49 N	368.51 W	813.71	.67
MSS	4013.00	14.75	N 30.00 W	156.00	3897.36	759.88 N	388.37 W	853.38	0.00
INTERSECT TARGET TOP @ 4110 M.D. (COAL)									
PROJ	4110.00	14.75	N 32.00 W	97.00	3991.16	781.05 N	401.09 W	878.01	.52
MSS	4199.00	14.50	N 34.00 W	89.00	4077.28	799.89 N	413.33 W	900.36	.63
MSS	4290.00	13.50	N 33.00 W	91.00	4165.57	818.25 N	425.48 W	922.24	1.13
PROJECTION TO WELLS TOTAL DEPTH (T.D.)									
PROJ	4350.00	13.00	N 32.00 W	60.00	4223.98	829.84 N	432.87 W	935.93	.92

S.S. DEGRAFFENREID, DIRECTIONAL SUPERVISOR

BOTTOM HOLE CLOSURE: 935.96 Feet at N 27.55 Degrees W

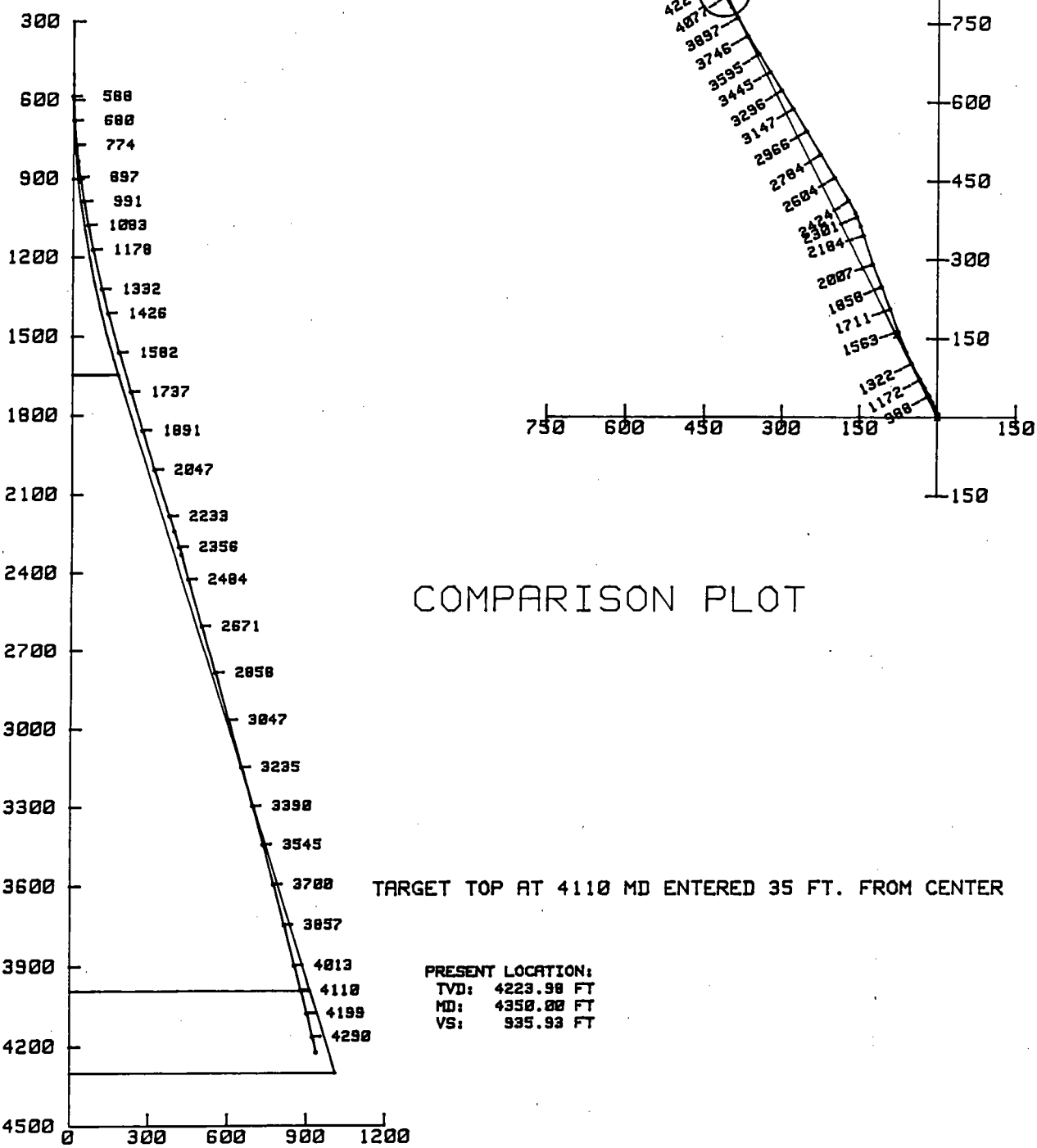
9 JAN 1990 @ 13:40

NASSAU RESOURCES
CARRACAS UNIT 13A-14
RIO ARRIBA COUNTY, NEW MEXICO
SECTION 13-T32N-R5W

SMITH

VERTICAL PLANE
SCALE: 300 FEET/DIVISION

HORIZONTAL PLANE
SCALE: 150 FEET/DIVISION



COMPARISON PLOT

TARGET TOP AT 4110 MD ENTERED 35 FT. FROM CENTER

PRESENT LOCATION:
TVD: 4223.98 FT
MD: 4350.00 FT
VS: 935.93 FT

VERTICAL SECTION PLANE: N 27.07 W

K.O.P. = 500, FEET

OKLAHOMA CITY, OK 405/789-0710 — EVANSTON, WYO 307/789-1681 — CASPER, WYO 307/472-4826 — TULSA, OK 918/583-9233 — DENVER, CO 303/623-6606

sii DATADRIL
Division of Smith International, Inc.
Survey Services

COMPANY NASSAU RESOURCES INC LEASE CARRACAS UNIT JOB NO. 1156 89 2130
LOCATION RIO ARRIBA COUNTY, N.M. WELL NAME/NO. 13A-14 OBJECTIVE 1010' @ 4289 @ N27W DISTRICT CASPER-1156
TYPE OF SURVEY SINGLESHOT (sii) RIG ARAPAHOE RIG #6 METHOD OF COMPUTATION MINIMUM RADIUS CURV
SURVEYOR STEPHEN S. DEGRAFFENREID KBH 13' MAG. CORRECTION 12°-EAST TRUE GRID DATE 9-15-89 PAGE 1 OF

COURSE LENGTH	MEASURED DEPTH	OBSERVED DRIFT ANGLE	CORRECTED DRIFT DIRECTION	COURSE VERTICAL DEPTH	TRUE VERTICAL DEPTH	DOG LEG	VERTICAL SECTION	COURSE DEVIATION	COURSE COORDINATES NORTH	COURSE COORDINATES SOUTH	COURSE COORDINATES EAST	COURSE COORDINATES WEST	TOTAL RECTANGULAR COORDINATES NORTH	TOTAL RECTANGULAR COORDINATES SOUTH	TOTAL RECTANGULAR COORDINATES EAST	TOTAL RECTANGULAR COORDINATES WEST
0	0	0	0		0		0			(SLICK)			0	0	0	0
35	435	0 50	N 77 E		434 99	0.11	-0 46			↓			0 43		1 85	
62	497	0 50	N 60 E		496 99	0.24	-0 51	(6½°	D-500	w/1°-BS		)(N @ 500')	0 62		2 35	
91	588	1 75	N 31 W		587 98	2.01	0 89		↓				2 01		1 98	
92	680	3 75	N 29 W		679 87	2.18	5 30						5 85			0 21
94	774	6 0	N 22 W		773 52	2.47	13 27						13 09			3 54
62	836	7 0	N 22 W		835 12	1.61	20 26						19 60			6 17
59	895	8 25	N 25 W		895 58	2.15	28 34						27 01			9 41
92	991	9 50	N 29 W		988 45	1.48	42 83						39 91			16 02
92	1083	11 0	N 30 W		1078 98	1.64	59 18						54 15			24 09
95	1178	12 0	N 29 W		1172 08	1.07	78 11		↑				70 64			33 41
154	1332	14 0	N 27 W		1322 12	1.33	112 74	(60'	WIPER/	BULLDER	IN @ 1254')		101 24			49 63
94	1426	15 25	N 26 W		1413 07	1.36	136 47			↓			122 79			60 21
156	1582	16 75	N 19 W		1563 04	1.57	179 25	(	PACKED	w/TANDEM	IN @ 1467)		162 19			76 53
159	1737	17 25	N 20 W		1711 27	0.37	224 17			↓			204 90			91 66
154	1891	17 25	N 23 W		1858 34	0.58	269 60						247 38			108 39
156	2047	17 25	N 20 W		2007 33	0.57	315 63						290 41			125 34
186	2233	18 50	N 17 W		2184 35	0.83	372 06						344 54			143 40
60	2293	18 25	N 20 W		2241 29	1.63	390 76	(6½°	D-500	w/1°-BS	IN @ 2275)		362 48			149 40
63	2356	16 75	N 22 W		2301 38	2.56	409 59			↓			380 16			156 17

T.D. TARGET: 50 RADIUS 900 -NORTH, 460 -WEST

OKLAHOMA CITY, OK 405/789-0710 — EVANSTON, WYO 307/789-1681 — CASPER, WYO 307/472-4826 — TULSA, OK 918/583-9233 — DENVER, CO 303/623-6606

SMITH DATADRIL
Division of Smith International, Inc.
Survey Services

COMPANY NIASSAU RESOURCES LEASE CARRACAS MESA JOB NO. 1156 - 892130
LOCATION RIO ARRIBA COUNTY, NEW MEXICO WELL NAME/NO. CARRACAS 13A - 14 T.D OBJECTIVE 1010 DEP AT 4299 AT N27W DISTRICT 1156 - CPR
TYPE OF SURVEY SII SINGLESHOT RIG ARAPAHOE #6 METHOD OF COMPUTATION MIN. RAD OF CURV
SURVEYOR S.S. DEGRAFFENREID KBH 13' MAG. CORRECTION 12°-E TRUE GRID DATE 9-21-89 PAGE 2 OF

COURSE LENGTH	MEASURED DEPTH	OBSERVED DRIFT ANGLE	CORRECTED DRIFT DIRECTION	COURSE VERTICAL DEPTH	TRUE VERTICAL DEPTH	DOG LEG	VERTICAL SECTION	COURSE DEVIATION	COURSE COORDINATES NORTH	COURSE COORDINATES SOUTH	COURSE COORDINATES EAST	COURSE COORDINATES WEST	TOTAL RECTANGULAR COORDINATES NORTH	TOTAL RECTANGULAR COORDINATES SOUTH	TOTAL RECTANGULAR COORDINATES EAST	TOTAL RECTANGULAR COORDINATES WEST
30	2386	16 25	N 24 W		2330 14	2.52	418 09						38801			159 50
98	2484	16 0	N 34 W		2424 31	2.84	445 19	(PACKED W/TANDEM IN 2421)					411 74			172 63
87	2671	16 25	N 31 W		2603 95	0.47	496 88			↓			465 53			200 52
87	2858	16 0	N 33 W		2783 60	0.33	548 62						499 57			228 03
89	3047	15 ½	N 30 W		2965 50	0.51	599 75						543 29			254 85
88	3235	15 ½	N 32 W		3146 67	0.28	649 86						586 35			280 72
55	3390	15 ¾	N 33 W		3295 94	0.24	691 42						621 55			303 15
55	3545	15 ½	N 31 W		3445 21	0.38	733 01						656 95			325 27
55	3700	15 0	N 34 W		3594 75	0.60	773 58	(PACKED W/TANDEM IN 3591)					691 33			347 16
57	3857	14 ¾	N 30 W		3746 50	0.67	813 71			↓			725 49			368 51
56	4013	14 ¾	N 30 W		3897 36	0	853 38						759 88			388 37
86	4199	14 ½	N 34 W		4077 33	0.56	900 14						799 69			413 23
91	4290	13 ½	N 33 W		4165 63	1.13	922 02						818 05			425 39
T.D.	4350	13 0	N 32 W		4224 03	0.92	935 71	(BHL CLOSURE = 935.74 @ N-27.32-W)					829 64			432 78
PROJECTED TO	4110	14 ¾	N 32 W		3991 16		877 98	(CLOSURE = 877 88 @ N-27.21-W)					780 74			401 41
	PROTECTION	(50' RADIUS TARGET CENTER = 913.57 VERTICAL SECTION						AT N-27.07-W	AT 3991 TVD)							
		WELLBORE AT 4110 MD. INTERSECTED TARGET						35.59	FEET	FROM CENTER)						

Taylor A. Debruff
Directional Supervisor

17 (4/84)

DATADRIL

NASSAU RESOURCES
CARRACAS UNIT 13A-14
RIO ARRIBA COUNTY, NEW MEXICO
SECTION 13-T32N-R5W

DIRECTIONAL CONTROLLED
DEC 12-DEG. EAST
NORTH 27.07 WEST
K.O.P. = 500 FT. MD
TARGET TVD = 3991

S.S. DEGRAFFENREID

FILE NAME: NACAR13A14

***** RECORD OF PROPOSAL *****

RADIUS OF CURVATURE METHOD
PROPOSAL COMPUTED BY THE DATADRIL CADDS SYSTEM
VERTICAL SECTION PLANE: N 27.07 W

MEASURED DEPTH (FT)	COURSE LENGTH (FT)	INCL. ANGLE (DEG)	D R I F T DIRECTION (DEG)	TRUE VERTICAL DEPTH	T O T A L RECT COORDINATES (FT)	(FT)	VERTICAL SECTION (FT)	DOGLEG SEVERITY (DEG/100')
0.00	0.00	0.00	N 27.07 W	0.00	0.00 N	0.00 E	0.00	0.00
START OF BUILD #1								
500.00	500.00	0.00	N 27.07 W	500.00	0.00 N	0.00 E	0.00	0.00
600.00	100.00	1.50	N 27.07 W	599.99	1.17 N	.60 W	1.31	1.50
700.00	100.00	3.00	N 27.07 W	699.91	4.66 N	2.38 W	5.23	1.50
800.00	100.00	4.50	N 27.07 W	799.69	10.48 N	5.36 W	11.77	1.50
900.00	100.00	6.00	N 27.07 W	899.27	18.63 N	9.52 W	20.92	1.50
1000.00	100.00	7.50	N 27.07 W	998.57	29.10 N	14.87 W	32.68	1.50
1100.00	100.00	9.00	N 27.07 W	1097.54	41.88 N	21.40 W	47.03	1.50
1200.00	100.00	10.50	N 27.07 W	1196.09	56.95 N	29.11 W	63.96	1.50
1300.00	100.00	12.00	N 27.07 W	1294.16	74.33 N	37.99 W	83.47	1.50
1400.00	100.00	13.50	N 27.07 W	1391.70	93.98 N	48.03 W	105.54	1.50
1500.00	100.00	15.00	N 27.07 W	1488.62	115.90 N	59.23 W	130.15	1.50
1600.00	100.00	16.50	N 27.07 W	1584.86	140.07 N	71.58 W	157.30	1.50
END OF BUILD #1...START OF BUILD #2								
1664.00	64.00	17.46	N 27.07 W	1646.07	156.71 N	80.09 W	175.99	1.50
END OF BUILD #1...START OF HOLD SECTION								
1664.80	.80	17.45	N 27.07 W	1646.83	156.92 N	80.20 W	176.23	1.50
TARGET LOCATION: 3991 TVD								
4122.03	2457.22	17.45	N 27.07 W	3991.00	812.98 N	415.49 W	913.00	0.00

DATADRIL

NASSAU RESOURCES
CARRACAS UNIT 13A-14

RIO ARRIBA COUNTY, NEW MEXICO
SECTION 13-T32N-R5W

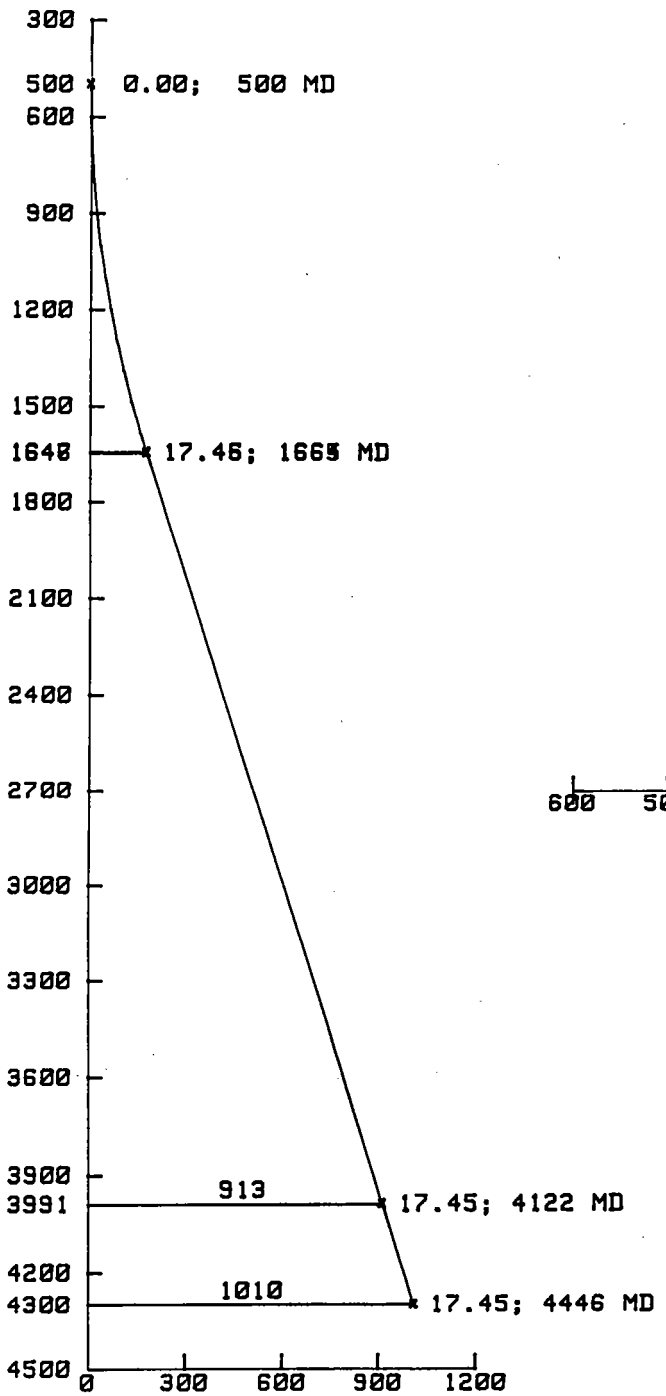
MEASURED DEPTH (FT)	COURSE LENGTH (FT)	INCL. ANGLE (DEG)	D R I F T DIRECTION (DEG)	TRUE VERTICAL DEPTH	T O T A L RECT COORDINATES (FT)	(FT)	VERTICAL SECTION (FT)	DOGLEG SEVERITY (DEG/100')
BOTTOM HOLE LOCATION (TD): 4300 TVD								
4445.93	323.90	17.45	N 27.07 W	4300.00	899.46 N	459.68 W	1010.12	0.00

9 OCT 1989 @ 12:34

NASSAU RESOURCES
CARRACAS UNIT 13A-14
RIO ARRIBA COUNTY, NEW MEXICO
SECTION 13-T32N-R5W

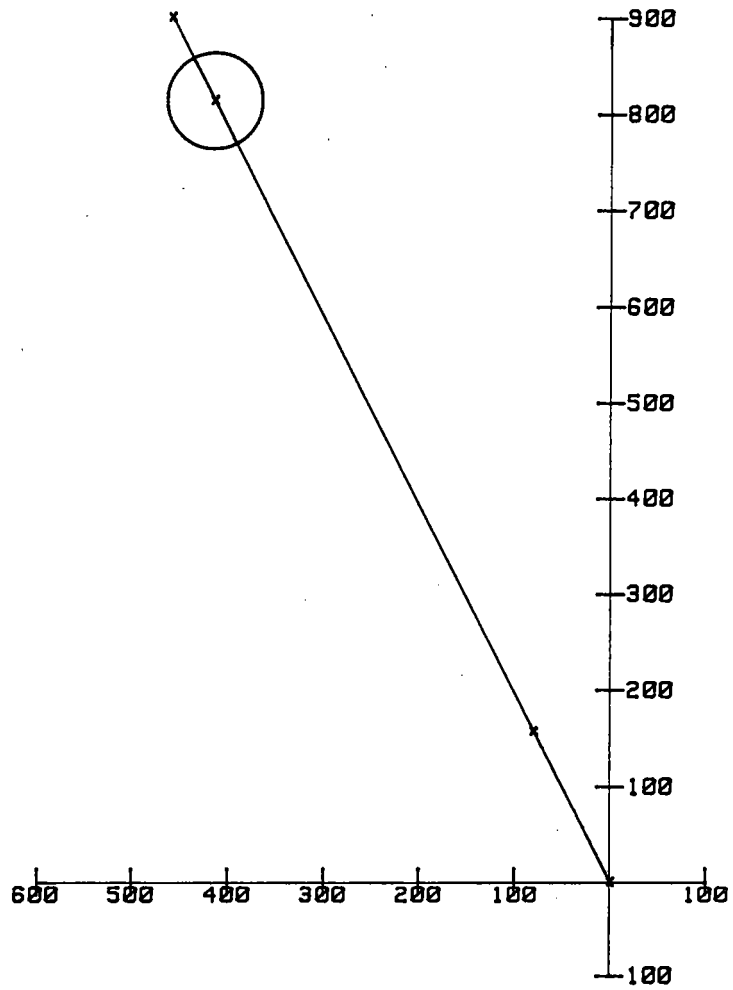
SMITH

VERTICAL PLAN
SCALE: 300 FEET/DIVISION



VERTICAL SECTION PLANE: N 27.07 W

HORIZONTAL PLAN
SCALE: 100 FEET/DIVISION



JAMES HAZEL - NASSAU SUPT. / MIKE ATCHISON, ATCHISON MUD CO. / 307-472-1120 PHONE

SMITH TOOL BIT RECORD

Division of Smith International, Inc

DOYLE CASTLE / O.B.? TOOL PUSHER — STEPHEN S. DEGRAFFENREID SMITH REPRESENTATIVE EMP I.D.

BIT RECORD DATA BASE DOCUMENT NUMBER

DO NOT WRITE IN THIS SPACE

OPERATOR	CONTRACTOR	RIG NO.	LEASE	WELL NO.	BLOCK
NASSAU RESOURCES	ARAPAHOE DRLG	6	CARRACAS UNIT	13A-14	

COUNTRY	STATE	COUNTY	TOWNSHIP	RANGE	SECTION	Q-SEC	QQ-SEC	FIELD
USA	NEW MEXICO	RIO ARRIBA	32-N	5-W	13	SE	NW/SE	CARRACAS MESA

LATITUDE ( ) N ( ) S — LONGITUDE ( ) E ( ) W

DRILL PIPE 4½ 16.60 (VERY USED)

DRAW WORKS NATIONAL T-25

SPUD DATE 9-14-89

■ DAYWORK ☐ FOOTAGE ☐ TURNKEY TURNKEY NAME ____

RIGSITE ELEVATION KBH = 7418

OFFSHORE WATER DEPTH N/A

TOOL JOINT MAKE — SIZE 4½ — TYPE XH

TYPE POWER WAUKESHA KB (3) HP 750

UNDER SURF 6:30 PM 9-15-89

WATER SOURCE HAULED PRODUCTION FRESH

MUD TYPE LSND (SOLTEX)

DRILL COLLAR NO 17 — O.D. 6-6½ — I.D. 2¼ — LENGTH

PUMP NO. 1 MAKE GARDNER DENVER — MODEL PZ-8 — STROKE 8 X 6½

INT DATE 9-15-89

■ EXPLORATION ■ DEVELOPMENT

■ TIGHT HOLE ☐ ESTIMATED BIT RECORD

DRILL COLLAR NO. — O.D. — I.D. — LENGTH

PUMP NO. 2 MAKE NATIONAL — MODEL C-150 — STROKE 12 X 5½

T.D. DATE 8:00 PM 9-26-89 (11 DAYS)

BIT NO	BIT SIZE	BIT MFGR	BIT TYPE	SERIAL NO. OF BIT	RR RT	JET SIZE OR TFA	DEPTH OUT	FTGE	HOURS RUN	ACC HOURS	FT/HR	WEIGHT 1000 LB	ROTARY RPM	VERT DEV	PUMP PRESS	PUMPS No	PUMPS Liner	PUMPS SPM	MUD Wt	MUD Vis	DULL CODE B_1	DULL CODE B_2	DULL CODE B_3	DULL CODE G	REASON PULLED	COMMENTS DULL CONDITION FORMATION	DATE
A	12¼	STC	PDJ	EW8338	RR	?	290	290	8	8	36	10/20	80/100	0	?	1	6½	100	8.3					?	9⅝		9-15
1	8¾	STC	PDJ	EX1600	N	3/12	500	210	2¾	10¾	76	10/15	100	½°	800	1	6½	90	8.5	32	5	5	3	2/16	K.O.P.	ROTARY/SH	9-15
2	8¾	STC	SDGH	XJ-3833	N	3/13	875	375	10¾	21½	35	8/10	410	7°	600	1	6½	90	8.5	35	5	5	4	3/16	BOP CHANGE	D-500/SH	9-16
3	8¾	STC	SDGH	KZ-7947	N	3/12	1254	379	15¾	37¼	24	10/12	410	12°	800	1	6½	90	8.5	36	5	5	4	3/16	RDB JUNK	D-500/SH	9-17
4	8¾	STC	F2	XJ-2061	N	3/12	2275	1021	42¾	80	24	20/30	90/100	17°	700	1	6½	92	9.3	42	2	2	3	1/16	BHA	ROTARY/SH	9-17
5	8¾	STC	FDGH	KJ-3416	N	3/12	2445	170	10¾	90¾	16.	10/12	410	17°	900	1	6½	92	9.2	70	5	8	8	4/16	ROP	D-500/SH	9-20
RR4	8¾	STC	F2	XJ-2061	RR	3/12	2523	78	2½	93¼	31	25/30	70/80	17°	900	1	6½	92	9.4	40	2	2	3	2/16	WIPER RUN	ROTARY/SH	9-21
6	8¾	STC	F2	KK-5179	N	3/12	3591	1070	55¼	148½	20	30/35	70/80	16°	1000	1	6½	95	9.4	45	3	4	4	2/16	TG GAUGE	ROTARY/SND SH	9-22
7	8¾	STC	F2-L	KE-8656	N	3/12	4350	759	39	187½	20	30/35	70/80	15°	1050	1	6½	95	9.4	60	3	3	4	2/16	T.D.	ROTARY/SND SH/CO	9-24

— HOLE DIRECTIONALLY DRILLED FROM 500' — T.D. WITH SINGLE SHOT ORIENTATION —

— ALL ROTARY ASSEMBLIES RUN USING STABILIZED B.H.A.'S —

— TOTAL RIG DOWNTIME FROM SHOE TO T.D. = 12½ HOURS —

MUD TYPE

AIR = AIR/GAS
DIS = DISPERSED
FOA = FOAM
GEL = GEL MUD
H2O = WATER
MIS = MIST
NAT = NATIVE/SPUD
OIL = OIL BASE
POL = POLYMER MUD
SWH = SALTWATER MUD

DULL CODE

B1 = BEARING -- NO 1 CONE
B2 = BEARING -- NO 2 CONE
B3 = BEARING -- NO 3 CONE
SEALED BEARINGS: 3 = BRG/SEAL EFFECTIVE; 5 = BRG/SEAL QUESTIONABLE; 8 = BRG/SEAL FAILURE
OPEN BEARING: 1 TO 8 (8 = FAILED)
Ti = INNER ROWS; Tg = GAGE ROWS — RATE 1 THROUGH 8 — AVERAGE OF ALL CONES; 8 = 100% OF ALL TEETH WORN FLAT OR BROKEN
G = AMOUNT UNDERGAGE — I = INGAGE; O = OUT OF GAGE (AMOUNT NOT MEASURED); 1/16 = 1/16" UNDERGAGE (SPECIFY AMOUNT)

NOTE CONTRACT TYPE CHANGE BY DEPTH/DATE IN COMMENTS SECTION.

REASON PULLED

BHA = CHANGE BHA
BOP = TEST BOP
CH = CONDITION HOLE
CO = CORING
CP = CASING POINT
CPF = COST PER FOOT
DEV = DEVIATION
DST = DRILL STEM TEST
FC = FORMATION CHANGE
HR = HOURS ON BIT
L = LOGGING
LC = LOST CIRCULATION
O = OTHER
PJ = PLUGGED JET
ROP = RATE OF PENETRATION
RR = RIG REPAIR
TD = TOTAL DEPTH
TQ = TORQUE
TW = TWISTED OFF
WE = WEATHER
WO = WASHOUT

COMMENTS DULL CONDITION

BF = BEARING/SEAL FAILURE
BT = BROKEN/CHIPPED TEETH
BU = BIT BALLED UP
CO = CORED
LC = LOST CONE
LI = LOST INSERTS
RE = REAMED
TT = TRACKING
WO = WASHOUT
WT = WORN TEETH

FORMATION

AN = ANHYDRITE
CG = CONGLOMERATE
CH = CHERT
CK = CHALK
CL = CLAY
CO = COAL
CT = CEMENT
DO = DOLOMITE
EV = EVAPORITES
GR = GRANITE
GU = GUMBO
GW = GRANITE WASH
GY = GYPSUM
LS = LIMESTONE
MA = MARL
MU = MUDSTONE
PY = PYRITE
QT = QUARTZITE
RB = REDBED
SA = SALT
SD = SAND
SH = SHALE
SS = SANDSTONE
ST = SILTSTONE

R37-002

(1/2) (TRAVEL) (1/2) (STAND BY) (1) (FULL)

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

	OPERATOR: NASSAU RESOURCES	C/P/ST.: RIO ARRIBA COUNTY, NEW MEXICO	DATE: 9:13-89 / 9-14-89 / 9-15-89
	REP.: JAMES HAYSON	WELL: CARRACAS UNIT 13A-14	SDS OP.: S.S. DEGRAFFENREID
LEGALS: SECTION 13 - T32N - R5W	CTR/RIG: ARAPAHOE #6	FIELD: CARRACAS MESA	JOB NO.: 1156 892130
TYPE: CONTROLLED DIRECTIONAL	REP.: DOYLE CASTLE	GEO.:	DECLINATION: 12°-E

COMMENTS, COST INFO, ETC.

9-13-89, CPR TO WALSENBURG, 9-14-89 TO RIGSITE, OFFLOAD TOOLS FROM LUCAS, 9-15-89 SPOT CORAB TRAILER FROM RICHARDSON, DRILL 9 5/8 SHOE @ 286 TO K.O.P. @ 500', CIRC, TOOH FOR KICK BHA #1,

BHDA NO.: A	BUILD	HOLD	DROP	OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT #1	EX-1600	8 3/4				
16-DC (XH) (SLICK)		(DRILL SHOE @ 286)				
4 1/2 XH DP	16.60	(USED)				
	(9 5/8	36/16	SS-K	SET @ 286)	TOTCO = 1/2°	
					TOTAL	

BHDA NO.	BUILD	HOLD	DROP	OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
					TOTAL	

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8 3/4	EX-1600	STC	DGJ	3/12	800				(1/8)	5-3-(1/8)-E

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT
LSND	8.3	7	—	1/2	T/R	—	
SOLTEX			YIS-35				

LCM

TYPE	#/BBL
CEDAR FIBRE	

GENERAL OPERATIONS DATA

RUN NO.	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL ETC.
1	A	286	500	210	2 3/4	1 1/4	76	350	5/15	100	—	—	—	—	800	SURFACE	K.O.P. @ 500'
																100% SHALE	
TOTALS:																	

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

(2)

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

LEGALS:	OPERATOR: NASSAU	C/P/ST.: RIO ARRIBA, NEW MEXICO	DATE: 9-16-89
TYPE: DIRECTIONAL	REP.: TERRY JONES	WELL: CARRACAS UNIT 13A-14	SDS OP.: DELRAFFENREID
	CTR/RIG: ARAPAHOE 6	FIELD: CARRACAS MESA	JOB NO.: 1156-892130
	REP.: DOYLE CASTLE	GEO.:	DECLINATION:

COMMENTS, COST INFO, ETC.

PICK UP BHA #1 BELOW ROTARY @ 12:30 AM

K.O.P. = 500' TOOH @ 4:00 PM FOR BIT CHANGE, TIH, DRLG @ 875' @ 6:15 PM

BHDA NO.: 1	BUILD	HOLD	DROP	OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT #2	XJ-3833	BIT #3 -KZ-7947		BELOW ROT		12:30 AM
6½ D-500	D-651016			PUMP ON		2:00 AM
FLOAT SUB	58102			PUMP OFF		4:00 PM
1°-BS	59063	(KICK)		ABOVE ROT		5:15 PM
X-O	59089					
MONEL	D6-5248			BELOW ROT		5:30 PM
17-DC	ARAPAHOE	(6¼ X 2¼)		PUMP ON		6:15 PM
			TOTAL			

BHDA NO.	BUILD	HOLD	DROP	OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
			TOTAL			

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8¾	XJ-3833	STC	SDGH	3/13	600				(1/8)	5-3-E
8¾	KZ-7947	STC	SDGH	3/12	900					

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT
LSND	8.5	7	NS-36	½	Tr	—	

LCM

TYPE	#/BBL

GENERAL OPERATIONS DATA

RUN	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL, ETC.
1	1	500	875	375	10¾	2¾	35	325	8/10	410	—	—		300	600	SHALE	SLOW PENETRATION (BIT)
2	1	875						325	10/12	410	—	—		500	900		
	TOTALS:																

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

OPERATOR: NASSAU RESOURCES INC	C/P/ST.: RIO ARRIBA, NEW MEXICO	DATE: 9-17-89
REP.: GLENN HISE	WELL: CARRACAS UNIT 13A-14	SDS OP.: DEGRAFFENREID
LEGALS: SEC 13 T32N R5W	CTR/RIG: ARAPAHOE #6	FIELD: CARRACAS MESA	JOB NO.: 1156-892130
TYPE: DIRECTIONAL CONTROLLED	REP.: DOYLE CASTLE	GEO.:	DECLINATION: 12°-E

COMMENTS, COST INFO, ETC.

DRLG W/BHA #1, TOOH FOR BIT & BHA #2 AT 1254' MD, TITE @ 975 PUMP SHALE OUT OF HOLE, TOOH, LAY DOWN BHA #1, PICK UP BHA #2, WIPE KICK 300' TO 1254', (HOLE SWELLED UP FROM BELOW SHOE FROM NO ROTATION FOR APPX 18-HRS)

WORK ON RIG PUMPS 5:30-6:45 (1¼")

BHDA NO.: 1 | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT #3	KZ-7947	8¾				
6½ D-500	D-651016					
FLOAT SUB	58102	(KICK)				
1°-BS	59063					
X-O	59089					
MONEL	D6-3248					
16-DC						
			TOTAL			

BHDA NO. 2 | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT #4	XJ-2061	8¾				
4/8 IBS	693449					
IBS	85794					
MONEL	D6-3248	(WIPER/BUILDER)				
1-DC						
IBS	86095					
15-DC						
			TOTAL			

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8¾	KZ-7947	STC	SD6H	3/12	900				3/16	5-3-E
8¾	XJ-2061	STC	F-2	3/12						

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT
LSND							

LCM

TYPE	#/BBL

GENERAL OPERATIONS DATA

RUN	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL, ETC.
2	1	875	1254	379	15¾	2¼	24	325	10/15	410	—	—	—	600	900	SHALE	BIT, PICK UP BHA #2
1	2	1254						325	5/10	90							
		(WIPE 300-1254)															
	TOTALS:																

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

OPERATOR: NASSAU RESOURCES	C/P/ST.: RIO ARRIBA NEW MEXICO	DATE: 9-18-89
REP.: JAMES HAZEN	WELL: CARRACAS UNIT 13A-14	SDS OP.: DELRAFFENREID
CTR/RIG: ARAPAHOE 6	FIELD: CARRACUS MESA	JOB NO.: 1156-892130
REP.: DOYLE CASTLE	GEO.:	DECLINATION: 12°E
LEGALS: SEC 13-T32N-R5W		
TYPE: DIRECTIONAL CONTROLLED		

COMMENTS, COST INFO, ETC.

WASH & REAM KICK TO 1254, TITE SPOTS, BENTONETIC SHALES, (STRINGERS) DANGER FOR STICKING STABS ON TRIPS! DRLG @ 4:30 am, STOP @ 1467, TOOH FOR BHA CHANGE, BHA #3, TIH (GOOD TRIP) DRLG @ 1467 —
(NOTE* PACKED BHA 6° RIGHT WALK IN 150' —)

BHDA NO.: 2 | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	XJ-2061					
N/B IBS	693449					
IBS	85794	(WIPER / BUILDER)				
MONEL	D6-5248					
1-DC						
IBS	86095					
15-DC						
			TOTAL			

BHDA NO. 3 | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	XJ-2061 (RR)	8 3/4				
N/B IBS	693449					
IBS	85794	(PACKED W/TANDEM)				
MONEL	D6-5248					
IBS	693963					
1-DC						
IBS	86095					
15-DC						
			TOTAL			

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8 3/4	XJ-2061	STC	F2	3/12	600					

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT
LSND	9.3	10	YP=3 / VIS-42	TR	—	—	
SOLTEX	TREATED						

— BRING V.P. UP —

LCM

TYPE	#/BBL

GENERAL OPERATIONS DATA

RUN	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	92 SPM @ VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL, ETC.
1	2	1254	1467	213	6 3/4	1/2	32	325	30	90	—	2/2	—	600	600	SHALE	(BENTONETIC, SQUEEZING !!)
		(WIPE 300'-1254)	954			7 1/4											
										90/100	—	FORMATION TOPS			700		
1	3	1467						325	20	90/100			OJO ALAMO 3311				
													KIRTLAND 3471				
													FRUITLAND 3793			← COAL 4000	
													PICTURED CLIFFS 4076				
													LEWIS 4248				
		TOTALS:															

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

OPERATOR: NASSAU RESOURCES	C/P/ST.: RIO ARRIBA, NEW MEXICO	DATE: 9-19-89
REP.: JAMES HAZEN	WELL: CARRACAS 13A-14	SDS OP.: DEGRAFFENREID
LEGALS: SEC 13 - T32N - R5W	CTR/RIG: ARAPAHOE 6	FIELD: CARRACAS MESA	JOB NO.: 1156-892130
JOB TYPE: DIRECTIONAL CONTROLLED	REP.: DOYLE CASTLE	GEO.:	DECLINATION: 12°-E

COMMENTS, COST INFO, ETC.
DRLG W/BHA #3 —

BHDA NO.: 3	BUILD	HOLD	DROP	OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	XJ-2061	8 3/4				
W/B IBS	693449					
IBS	85744					
MONEL	D6-5248	(PACKED W/TANDEM)				
IBS	693963					
1-DC						
IBS	86095					
15-DC						
			TOTAL			

BHDA NO.	BUILD	HOLD	DROP	OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
			TOTAL			

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8 3/4	XJ-2061	STC	FZ	3/12	700					

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT
LSND	9.2	17	YIS - 70	2	TR	—	
SOLTEX							

LCM

TYPE	#/BBL
NONE	

GENERAL OPERATIONS DATA

RUN NO.	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL ETC.
	3	1467						325	20	90/100	1/4	5/5	—	700	700	SHALE	OCCASIONAL FRACTURES —
								325	25	90/100	1/4	10/10					
																	RIG DOWNTIME TO DATE 5 -hrs
	TOTALS:																

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

OPERATOR: NASSAU RESOURCES	C/P/ST.: RIO ARRIBA CO, NEW MEXICO	DATE: 9-20-89
REP.: JAMES HAZEN	WELL: CARRACAS UNIT 13A-14	SDS OP.: DELRAFFENREID
LEGALS: SEC-13-T32N-R5W	CTR/RIG: ARAPAHOE 6	FIELD: CARRACAS MESA	JOB NO.: 1156-892130
TYPE: CONTROLLED DIRECTIONAL	REP.: DOYLE CASTLE	GEO.:	DECLINATION: 12°-E

COMMENTS, COST INFO, ETC.

DRLG W/BHA #3 @ 2082 MD —
SDDP @ 2275', TOOH FOR BHA #4
LAY DOWN STAB'S & TIH W/BHA #4
DRLG @ 2275'

NOTE! ON TOOH TITE, SQUEEZING SHALE, TAKU NEW CUT HOLE, PUMP OUT WORK PIPE, I WOULD SUGGEST RUNNING 9⅝ CSG TO K.O.P. IN 90° WELL ALSO SUGGEST SHORT TRIP EVERY 12 hrs ON THIS WELL — MWD USING STABILIZERS

BHDA NO.: 3 | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	XJ-2061	8¾				
N/B IBS	693449					
IBS	85794					
MONEL	D6-5248	(PACKED W/TANDEM)				
IBS	693963					
1-DC						
IBS	860955					
15-DC						
				TOTAL		

BHDA NO. 1 | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	KJ-3416	8¾				
6½" D-500	D-651016					
FLOAT SUB	58102					
1°-BS	59063	(KKK)				
X-O	59089					
MONEL	D6-5248					
16-DC						
				TOTAL		

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8¾	XJ-2061	STC	F2	3/12	800					
8¾	KJ-3416	STC	FDGH	3/12	900					

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT
LSND							
SOLTEX							

LCM

TYPE	#/BBL

GENERAL OPERATIONS DATA

BIT NO.	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL, ETC.
1	3	1467	2275	808	36	6-CIRC	22.4	325	20/25	90/100	1/4	10/10	—	800	800	SHALE	PICK UP BHA #4 TO BUMP WELL
XJ-2061	(TOTAL)	1254	2275	1021	42¾	13¼	23.8					15/10	—	800	800		
3	1	2275						325	10/12	410		10/10	—	600	900	SHALE	
																	RIG DOWN TIME TO DATE — 8 hrs
			TOTALS:														

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

OPERATOR: NASSAU RESOURCES	C/P/ST.: RIO ARRIBA NEW MEXICO	DATE: 9-21-89
REP.: JAMES HAZEN	WELL: CARRACAS 13A-14	SDS OP.: DEGRAFFENREID
LEGALS: SEC 13 - T32N - R5W	CTR/RIG: ARAPAHOE 6	FIELD: CARRACAS MESA	JOB NO.: 1156-892130
JOB TYPE: DIRECTIONAL CONTROLLED	REP.: DOYLE CASTLE	GEO.:	DECLINATION: 12°-E

COMMENTS, COST INFO, ETC.

ATTEMPT DRLG W/BHA #1, MUD AIRED UP 100# P.P. @ 100 SPM, CIRC & COND MUD, DRLG TO 2445, TOOH FOR BIT & BHA CHNG, PICK UP BHA #4 & TIH W/SAME WASH & REAM 2275 - 2445, DRLG - STOP @ 2521 TOOH TO PICK UP BHA #5

BHDA NO.: 1 | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	KJ-3416					
6½ D-500	D-651016					
FLOAT SUB	58102					
1°-BS	59063	(KICK)				
X-O	59089					
MONEL	D6-5248					
16-DC						
			TOTAL			

BHDA NO. 4 | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT (RR)	XJ-2061	8¾				
N/B IBS	693449					
IBS	85794					
MONEL	D6-5248	(WIPER/BUILDER)				
1-DC						
IBS	86095					
1-DC						
IBS	693963					
14-DC						
			TOTAL			

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8¾	RJ-3416	STC	FDGH	3/12	900	WORE SLAP OUT	—		1/4	8-8-I
8¾	XJ-2061	STC	F2 (RR)	3/12	900				1/16	3-3-I

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT
LSND	9.4		VIS 40	—	TR	—	

LCM

TYPE	#/BBL

GENERAL OPERATIONS DATA

RUN	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL, ETC.
✓	1	2275	2445	170	10¾	4¼	15.8	325	8/10	410	—	10/10	—	600	900	SHALE	DULL BIT / ROP
													(AIRED UP=	150	600)		
1	4	2445	2521	78	2½	3½	31.2	325	30	70	—	15/10	—	900	900	SHALE	WIPER TRIP, BHA CHNG —
	TOTALS:																

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

OPERATOR: NASSAU RESOURCES	C/P/ST.: RIO ARRIBA, NEW MEXICO	DATE: 9-22-89
REP.: JAMES HAZLO / TERRY JONES	WELL: CARRACAS 13A-14	SDS OP.: DEGRAFFENREID
LEGALS:	CTR/RIG: ARAPAHOE	FIELD: CARRACAS MESA	JOB NO.: 1156-892130
JOB TYPE: DIRECTIONAL CONTROLLED	REP.:	GEO.:	DECLINATION: 12°-E

COMMENTS, COST INFO, ETC.
PCK UP BHA # 5, TIH W/SAME, WORK ON PUMP, TIH, DRLG —

BHDA NO.: 5	BUILD	HOLD	DROP	OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	KK-5179	8 3/4				
4/3 IBS	85992					
IBS	85794					
PONY DC	52483					
IBS	693463	(MAXI-PACKED)				
MONEL	D6-5248					
IBS	86095					
1-DC						
3-PT RR	202257					
15-DC						
			TOTAL			

BHDA NO.	BUILD	HOLD	DROP	OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
			TOTAL			

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8 3/4	KK5179	STC	F2	3/12	900					

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT
LSND	9.2	7	VIS-40				

LCM

TYPE	#/BBL

GENERAL OPERATIONS DATA

RUN NO.	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL ETC.
1	5	2521						325	25	80	—		95-SPM E	900	900	SHALE	
									30	80/90	—	10/5					
																	RIG DOWNTIME TO DATE - 8 1/2
		TOTALS:															

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

OPERATOR: NASSAU RESOURCES	C/P/ST.: RIO ARRIBA NEW MEXICO	DATE: 9-23-89
REP.: JAMES HAZEN / TERRY JONES	WELL: CARRACAS 13A-14	SDS OP.: DEGRAFFENREID
LEGALS: SEC 13 - T32N - R5W	CTR/RIG: ARAPAHOE 6	FIELD: CARRACAS MESA	JOB NO.: 1156-892130
JOB TYPE: DIRECTIONAL CONTROLLED	REP.: O.B.?	GEO.:	DECLINATION: 12°-E

COMMENTS, COST INFO, ETC.
DRLG W/BHA # 5

BHDA NO.: 5	BUILD	HOLD	DROP			OTHER
ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	KK-5179	8 3/4				
N/B IBS	85992	1/16				
IBS	85794	1/16				
PONY DC	52483		(MAXI-PACKED)			
IBS	693963	1/8				
MONEL	D65248					
IBS	86095	1/8				
1-DC						
3-PT RR	202257	IN				
15-DC						
			TOTAL			

BHDA NO.	BUILD	HOLD	DROP			OTHER
ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
			TOTAL			

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8 3/4	KK5179	STC	F2	3/12	900					

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT
LSND	9.4	17	YP=15/VIS 40	3	TR	—	
SOLTEX							

LCM

TYPE	#/BBL

GENERAL OPERATIONS DATA

RUN	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL, ETC.
—	5	2521						325	30	80/90	1/4	10/5	—	950	1000	SHALE	
									35	80/90							
																	RIG DOWNTIME TO DATE: 9-hrs
	TOTALS:																

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

OPERATOR: NASSAU RESOURCES	C/P/ST.: RIO ARRIBA NEW MEXICO	DATE: 9-24-89
REP.: JAMES HAZEN / TERRY JONES	WELL: CARRACAS 13A-14	SDS OP.: DEGRAFFENRED
CTR/RIG: ARAPAHOE 6	FIELD: CARRACAS MESA	JOB NO.: 1166-892130
REP.: O.B. ?	GEO.:	DECLINATION: 12°-E
1 LEGALS: SEC 13 - T32N - R5W		
3 TYPE: DIRECTIONAL CONTROLLED		

COMMENTS, COST INFO, ETC.

DRLG W/BHA # 5, STOP @ 3591, TOOH FOR BIT, PICK UP BHA #6 & TIH W/SAME

(9-DAYS DRLG, AT 6:30 PM FROM SHOE)

BHDA NO.: 5	BUILD	HOLD	DROP		OTHER
ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	KK-5179	8 3/4				
N/B IBS	85992					
IBS	85794					
PONY DC	52483	(MAXI-PACKED)				
IBS	693963					
MONEL	D6 5248					
IBS	86095					
1-DC						
3-PT RR	202257					
15-DC						
			TOTAL			

BHDA NO. 6	BUILD	HOLD	DROP		OTHER
ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	KE 8656	8 3/4				
N/B IBS	85992	1/16 +				
IBS	85794	1/16				
MONEL	D6-5248	(PACKED W/TANDEM)				
IBS	693963	1/8				
1-DC						
IBS	86095	1/8 +				
1-DC						
3-PT RR	202257	1/8 +				
14-DC						
			TOTAL			

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8 3/4	KK-5179	STC	F2	3/12	1000				1/8	4-4-E
8 3/4	KE-8656	STC	F2L	3/12						

MUD DATA

TYPE	WT	PV	BHT/FLT		%SOL	%SAND	%OIL	ANIL PT	LCM TYPE	LCM #/BBL
LSND	9.4	14	YP=6	WL=8	7½	2	—			

GENERAL OPERATIONS DATA

N O.	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL, ETC.
1	5	2521	3591	1070	55¼	2	19.4	325	30/35	80/90	3/4	15/10	—	1000	1000	OJO ALAMO	GUAGE WEAR, TORQUE —
							(INTO OJO) →		35 → 65		"	15/10	—	"	"	(SHARP ABRASIVE SAND)	TOP OF OJO ALAMO @ 3435 MD 3345 TVD
1	6	3591															35-K WT @ 65 RPM = 5 min/ft 12-15'/hr
																	(RIG DOWNTIME TO DATE: 10 - HRS)
		TOTALS:															

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

OPERATOR: NASSAU RESOURCES	C/P/ST.: RIO ARRIBA NEW MEXICO	DATE: 9-25-89
REP.: JAMES HAZEN	WELL: CARRACAS 13A-14	SDS OP.: DEGRAFFENREID
LEGALS: SEC 13 - T32N - R5W	CTR/RIG: ARAPAHOE 6	FIELD: CARRACAS MESA	JOB NO.: 1156-88Z130
TYPE: DIRECTIONAL	REP.: O.B.?	GEO.:	DECLINATION: 12°-E

COMMENTS, COST INFO, ETC.

DRLG W/BHA #6 —

-INFORMED JAMES H. I COULD TRIP AND DROP STABILIZER TO HIT TARGET CENTER, NASSAU DECLINED, SHOULD HIT APPX 50'-60' FROM TARGET CENTER WITH PRESENT BHA —

BHDA NO.: 6	BUILD	HOLD	DROP	OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	KE-8656	8 3/4				
M/B IBS	85992					
IBS	86794					
MONEL	D6-5248	(PACKED W/TANDEM)				
IBS	693963					
1-DC						
IBS	86095					
1-DC						
3-PT RR	202257					
14-DC						
			TOTAL			

BHDA NO.	BUILD	HOLD	DROP	OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
			TOTAL			

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8 3/4	KE-8656	STC	F2L	3/12	1000					

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT

LCM

TYPE	#/BBL

GENERAL OPERATIONS DATA

RUN	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL ETC.
1	6	3591						325	30/35	70/80	1/2	15/10	—		1000		
																	RIG DOWNTIME TO DATE - 11-HRS
		TOTALS:															

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

OPERATOR: NASSAU RESOURCES	C/P/ST.: RIO ARRIBA NEW MEXICO	DATE: 9-26-89
REP.: JAMES HAZEN	WELL: CARRACAS 13A-14	SDS OP.: DEGRAFFENREID
LEGALS: SEC 13-T32N-R5W	CTR/RIG: ARAPAHOE 6	FIELD: CARRACAS MESA	JOB NO.: 1156-892130
TYPE: CONTROLLED DIRECTIONAL	REP.: O.B.?	GEO.:	DECLINATION: 12°-E

(T.D. @ 5:00-PM)

COMMENTS, COST INFO, ETC.

DRLG W/BHA # 6, T.D. AT
CIRC & CONDITION HOLE FOR LOGS
SURVEY, TOOH FOR LOGGING OP.

TITE HOLE - 3633-3483 (OJO ALAMO

(11-DAYS DRLG @ 6:30 PM FROM SHOE)

BHDA NO.: 6 | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	KE-8656	8 3/4				
N/B IBS	85992					
IBS	85294					
MONEL	D6-5248					
IBS	693963	(PACKED W/TANDEM)				
1-DC						
IBS	86095					
1-DC						
3-PT RR	202257					
14-DC						
			TOTAL			

BHDA NO. | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
				TOTAL		

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8 3/4	KE-8656	STC	F2L	3/12	1050					

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT
LSND							

LCM

TYPE	#/BBL

GENERAL OPERATIONS DATA

RUN NO.	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL, ETC.
1	6	3591	4350	759	39	3	19.5	325	35	70	1/2	15/10	—		1050		T.D. WELL
																	RIG DOWN TIME TOTAL = 12½ HOURS
																	FROM SHOE TO T.D.
	TOTALS:																

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

Sii Smit. .illing Systems
DAILY OPERATIONS REPORT

OPERATOR: NASSAU RESOURCES	C/P/ST.: RIO ARRIBA NEW MEXICO	DATE: 9-27-89
REP.: JAMES HAZEN	WELL: CARRACAS 13A-14	SDS OP.: DEGRAFFENREID
CTR/RIG: ARAPAHOE 6	FIELD: CARRACAS MESA	JOB NO.: 1156-892130
REP.: O.B.?	GEO.:	DECLINATION: 12° E
LEGALS:		
TYPE: DIRECTIONAL		

COMMENTS, COST INFO, ETC.

TOOH, TITE @ 1800-1200
STUCK SEVERAL TIMES, SHALE IS SWELLED UP, ATTEMPT TO BACKREAM OUT OF HOLE, CIRC COND, WORK PIPE, KEYSEAT WITH SWELLING SHALES.

BHDA NO.: 6 | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	KE-8656					
4/8 IBS	85492					
IBS	85794					
MONEL	D6-5248	(PACKED W/TANDEM)				
IBS	693963					
1-DC						
IBS	86095					
1-DC						
3-PT RR	202257					
14-DC						
			TOTAL			

BHDA NO. | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
	FORMATION TOPS ESTIMATED					
	— MEASURED DEPTHS —					
	OJO ALAMO		3440		20'/hr	
	KIRTLAND		3580		25'/hr	
	FRUITLAND		3950		25'/hr	
	- COAL -		4110 - 4138		90'/hr	
	PICTURE CLIFFS		4157		25'/hr	
	T.D.		4350		"	
			TOTAL			

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8 3/4	KE-8656	STC	FZL	3/12						

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT

LCM

TYPE	#/BBL

GENERAL OPERATIONS DATA

RUN	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL, ETC.
1	6		4350														
TOTALS:																	

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

OPERATOR: NASSAU RESOURCES	C/P/ST.: RIO ARRIBA NEW MEXICO	DATE: 9-28-89
REP.: JAMES HAZEN	WELL: CARRACAS 13A-14	SDS OP.: DEGRAFFENREID
LEGALS:	CTR/RIG: ARAPAHOE 6	FIELD: CARRACAS MESA	JOB NO.: 1156-892130
RIG TYPE: DIRECTIONAL	REP.: O.B.?	GEO.:	DECLINATION: 12° E

COMMENTS, COST INFO, ETC.

PICK UP K.S.W. & RUN IN D.P., REAM THRU KICK W/ KSW 1207 - 1950 (KICK 500-710) COND MOLE (SLUFFING SHALES), ATTEMPT TOOH, PICK UP STRING MILL

BHDA NO.: 6-A	BUILD	HOLD	DROP	OTHER
ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT						
4¾ STAB						
STAB						
MONEL	SAME					
IBS						
1-DC						
IBS						
1-DC		#90192				
3-PT RR	KSW 33 STDS DP					
14-DC						
7 EXX-DP						
			TOTAL			

BHDA NO.	BUILD	HOLD	DROP	OTHER
ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
			TOTAL			

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8¾	KE-8656	STC	F2L	3/12						

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT

LCM

TYPE	#/BBL

GENERAL OPERATIONS DATA

RUN	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL, ETC.
1	6		9350														
	TOTALS:																

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

LEGALS:		OPERATOR:	NASSAU RESOURCES	C/P/ST.:	RIO ARRIBA NEW MEXICO
JOB TYPE:	DIRECTIONAL	REP.:	MIKE ATCHINSON	WELL:	CARRACAS 13A-14
		CTR/RIG:	ARAPAHOE 6	FIELD:	CARRACAS MESA
		REP.:	O.B.?	GEO.:	

DATE:	9-29-89
SDS OP.:	DEGRAFFENREID
JOB NO.:	1156-892130
DECLINATION:	

COMMENTS, COST INFO, ETC.

REAM KEY SEAT OUT, TO 2500', CIRC & COND (SHALES UNLOADING) ATTEMPT TOOH, LAY DOWN BHA #6, TIH W/ BHA #7 KEYSEAT 500'-700'

BHDA NO.: 6-B | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT						
N/B STAB						
IBS						
MONEL						
IBS	SAME					
1-DC	STC-MILL —	SPIDEL				
IBS	1-DP					
1-DC	KSW —	90192				
3-PT	33-X-DP					
14-DC						
7 STDS DP						
		TOTAL				

BHDA NO. 7 | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	RR-KE8656					
N/B IBS	85992					
1-DC						
IBS	693963					
15-DC						
KSW	90192					
		TOTAL				

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8 3/4	KE8656	STC	F2L	3/12					1/16	4-4-E

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT

LCM

TYPE	#/BBL

GENERAL OPERATIONS DATA

RUN NO.	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL, ETC.
	6		4350														
TOTALS:																	

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

OPERATOR: NASSAU RESOURCES	C/P/ST.: RIO ARRIBA NEW MEXICO	DATE: 9-30-89
REP.: MIKE ATCHINSON	WELL: CARRACAS 13A-14	SDS OP.: DEE RAFFENREID
LEGALS:	CTR/RIG: ARAPAHOE 6	FIELD: CARRACAS MESA	JOB NO.: 1156-892130
TYPE: DIRECTIONAL	REP.: O.B.?	GEO.:	DECLINATION:

COMMENTS, COST INFO, ETC.

WASH & REAM TO BOTTOM W/BHA #7
#7 PUMP CHARGER PUMP DOWN WORK
ON PUMP & CIRC DOWN 13-HRS
WASH & REAM TO BTTM

BHDA NO.: 7 | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	KE8656					
N/B IBS	85992					
1-DC						
IBS	693963					
15-DC						
KSW	40192					
			TOTAL			

BHDA NO. | BUILD | HOLD | DROP | OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
			TOTAL			

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8 3/4	KE8656	STC	F2L	3/12	1000					

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT

LCM

TYPE	#/BBL

GENERAL OPERATIONS DATA

RUN	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL ETC.
1	7	3450															
																	RIG DOWNTIME TO DATE - 25 1/2
			TOTALS:														

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES

TRAVEL / 10-6-89 (1) (17)

Sii Smith Drilling Systems
DAILY OPERATIONS REPORT

OPERATOR: NASSAU RESOURCES	C/P/ST.: RIO ARRIBA NEW MEXICO	DATE: 10-1-89
REP.: JAMES HAZEN	WELL: CARRACAS 13A-14	SDS OP.: DEGRAFFENREID
LEGALS:	CTR/RIG: ARAPAHOE	FIELD: CARRACAS MESA	JOB NO.: 1156-892130
JOB TYPE: DIRECTIONAL	REP.: O.B.?	GEO.:	DECLINATION:

COMMENTS, COST INFO, ETC.

WASH & REAM TO BTM, CIRC & COND HOLE, SHORT TRIP, COND HOLE, TOOH FOR LOGS & LOGS NO GO TIH / STANDBY IN DURANGO 10-2-89 TO 10-5-89, TRAVEL 10-6-89

(LEASE LOCATION 11:30 AM 10-2-89)

BHDA NO.: 7	BUILD	HOLD	DROP	OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
BIT	KE-8656					
N/B IBS	85992					
1-DC						
IBS	693963					
15-DC						
15W	90192					
						TOTAL

BHDA NO.	BUILD	HOLD	DROP	OTHER

ELEMENT	SERIAL NO.	OD/GAGE	WT.	ID	TJ	LENGTH
						TOTAL

BIT DATA

SIZE	SER. NO.	MAKE	TYPE	TFA/NOZZ	PRESS	HSI	SPC	TCW	GAGE	IADC COND.
8 3/4	KE 8656	STC	F2L	3/12						

MUD DATA

TYPE	WT	PV	BHT/FLT	%SOL	%SAND	%OIL	ANIL PT

LCM

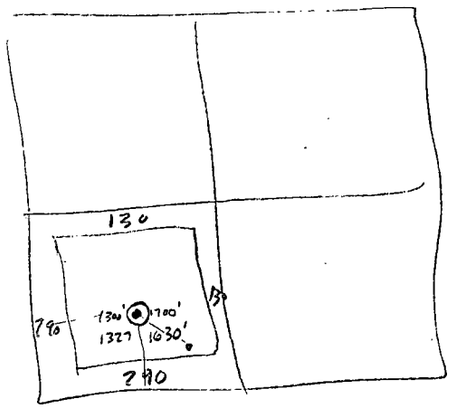
TYPE	#/BBL

GENERAL OPERATIONS DATA

RUN NO.	BHDA NO.	DEPTH IN	DEPTH OUT	FTG	DRLG. HRS.	CIRC/ REAM HRS.	ROP	VOL	DRLG WT	ROTARY RPM	TORQUE	DRAG	OBS REACT. TORQUE	OFF BTM PRESS	ON BTM PRESS	FORM/ LITH	COMMENTS, REASON FOR PULLING TOOL, ETC.
	7	3450															
TOTALS:																	

UNDERREAMING, PIPECUTTING, SECTION MILLING DATA

RUN NO.	BHDA NO.	SERIAL NO.	CLOSED DIA/ OPEN DIA.	NOZZ DIA TOOL/ TOT. NOZZ DIA.	TYPE OF CONES/KNIVES	SETS USED	LENGTH	CONDITION	COLLAR LOCATION	CUT OUT DEPTH	CUT OUT TIME	SINGLE/MULTI CUT SIZES


130
790
1327
1330'
1700'
1630'
790

GRYNBERG PETROLEUM COMPANY

OIL CONSERVATION DIVISION
RECEIVED
'90 JAN 30 AM 9 31

5000 SOUTH QUEBEC ● SUITE 500 ● DENVER, COLORADO 80237-2707 USA ● PHONE 303-850-7490

TELEX: 510 600 2180 ENERGY DVR
TELECOPIER: 303-850-7498

January 25, 1990

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

Attention: Michael Stagner

Re: Nassau Resources, Inc. Carracas Unit #13-A-14
Application for Administrative Approval
of Directional Drilling
Rio Arriba County, New Mexico

Gentlemen:

Celeste Grynberg dos not have any objection to the above referenced application.

Please feel free to call if you have any questions.

Very truly yours,

GRYNBERG PETROLEUM COMPANY

Susan Stone
Land Manager

SS/cjj

Amoco Production Company

Denver Region
1670 Broadway
P.O. Box 800
Denver, Colorado 80201
303-830-4040

January 23, 1990

Michael Stogner
New Mexico Oil Conservation Division
PO Box 2088
Santa Fe, NM 87504

File: CAW-117-986.511

Nassau Resources Carracas Unit 13-A-14
Section 13-T32N-R5W
Rio Arriba County, New Mexico

Amoco Production Company has no objection to the above captioned well drilled from a surface location 800' FSL and 1760' FWL of Section 13-T32N-R5W to a bottomhole location 1629.84' FSL and 1327.13' FWL of Section 13-T32N-R5W.

Sincerely,

J.W. Hawkins

cc: T.D. Autry - Building

Jerome P. McHugh and Associates
650 South Cherry, Suite 1225
Denver, CO 80222
Attn: Gary Johnson

McHUGH

Jerome P. McHugh & Associates
Operating Affilliate: Nassau Resources, Inc.
650 South Cherry, Suite 1225
Denver, Colorado 80222
(303) 321-2111 FAX (303) 321-1563

January 18, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Celeste Grynberg
Grynberg Petroleum
ATTN: SUSAN STONE
5000 S. Quebec St., Suite 500
Denver, CO 80237

Re: Application for Administrative Approval of Directional Drilling
Nassau Resources, Inc. Carracas Unit 13-A-14
Section 13, T32N, R5W, NMPM
Rio Arriba County, New Mexico

Dear Ms. Stone:

Nassau Resources, Inc. has drilled and completed the referenced well. The well was drilled directionally from a surface location of 800' FSL, 1760' FWL Sec. 13, T32N R5W, in Rio Arriba County, New Mexico. The permitted bottomhole location was 1700' FSL, 1300' FWL in Section 13, with a tolerance radius of 50'.

The well's final bottomhole location as surveyed is 1629.84' FSL and 1327.13' FWL. The actual location is 70.16' south of the permitted location and as such is 20.16' outside of the permitted radius tolerance. The bottomhole location is well within normal tolerances of setback from section lines as per NMOCD orders for the Fruitland Coal.

Nassau is requesting permission from the New Mexico Oil Conservation Division to produce the well as drilled. If you have no objections to the location, please notify the Oil Conservation Division as soon as possible. Please send a waiver to the attention of Michael Stagner, New Mexico Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87504.

Please call me if you have any questions.

Yours truly,

NASSAU RESOURCES, INC.

Gary J. Johnson

GJJ/cls

cc: NMOCD, Santa Fe
NMOCD, Aztec

McHUGH

Jerome P. McHugh & Associates
Operating Affilliate: Nassau Resources, Inc.
650 South Cherry, Suite 1225
Denver, Colorado 80222
(303) 321-2111 FAX (303) 321-1563

January 18, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. J.W. Hawkins
Land Department
Proration Group
Amoco Production Co.
P.O. Box 800 - 1670 BROADWAY
Denver, CO 80201

Re: Application for Administrative Approval of Directional Drilling
Nassau Resources, Inc. Carracas Unit 13-A-14
Section 13, T32N, R5W, NMPM
Rio Arriba County, New Mexico

Dear Mr. Hawkins:

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Please call me if you have any questions.

Yours truly,

NASSAU RESOURCES, INC.

Gary J. Johnson

GJJ/cls

cc: NMOCD, Santa Fe
NMOCD, Aztec

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

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

August 23, 1989

Nassau Resources, Inc.
c/o Jerome P. McHugh & Associates
P.O. Box 809
Farmington, NM 87499-0809

Attention: Fran Perrin

Administrative Order DD-28

Dear Ms. Perrin:

Under the provisions of General Rule 111 (c), (d) and (e), Nassau Resources, Inc. made application to the New Mexico Oil Conservation Division on July 26, 1989, for authorization to directionally drill its proposed Carracas Unit 13-A Well No. 14, Rio Arriba County, New Mexico.

The Division Director Finds That:

(1) The application has been duly filed under the provisions of Rule 11 (d) and (e) of the Division General Rules and Regulations;

(2) Satisfactory information has been provided that all offset operators have been duly notified;

(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, Nassau Resources, Inc., is hereby authorized to directionally drill its Carracas Unit 13-A Well No. 14, the surface location of which shall be 800 feet from the South line and 1760 feet from the West line (Unit N) of Section 13, Township 32 North, Range 5 West, Rio Arriba County, New Mexico, by kicking off from the vertical at a depth of approximately 500 feet, and drilling in such a manner as to bottom in the Basin-Fruitland Coal Gas Pool within a 50 feet radius of a point 1700 feet from the South line and 1300 feet from the West line (Unit L) of Section 13, being a standard coal gas well location for said pool.

PROVIDED HOWEVER THAT: prior to directional drilling, the operator shall determine the subsurface location of the kick-off point; and

PROVIDED FURTHER THAT: subsequent to the above-described directional drilling, should said well be a producer, a continuous multi-shot directional survey shall be made of the wellbore from total depth to kick-off point with shot points not more than 100 feet apart; the operator shall cause the surveying company to forward a copy of the survey report directly to the Santa Fe office of the Division, 310 Old Santa Fe Trail, Room 206, Santa Fe, New Mexico 87503, and the operator shall notify the Division's Aztec District Office of the date and time said survey is to be commenced.

(2) 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.

(3) The W/2 of said Section 13 shall be dedicated to the well forming a standard 320-acre spacing and proration unit for said pool.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

S E A L

cc: Oil Conservation Division - Aztec
US Bureau of Land Management - Farmington
US Forest Service - Blanco
NM Oil and Gas Engineering Committee - Hobbs

Jerome P. McHugh & Associates
P O Box 809, Farmington, New Mexico 87499-0809
(505) 326-7793

July 24, 1989

New Mexico Oil Conservation Division
Attn: Michael Stogner
P O Box 2088
Santa Fe, New Mexico 87504

RE: Application for Administrative Approval of
Directional Drilling
Nassau Resources, Inc., Carracas Unit 13 A #14
Section 13, T32N, R5W, NMPM
Rio Arriba County, New Mexico

Dear Mr. Stogner:

Nassau Resources, Inc., hereby requests administrative approval to directionally drill the subject well as follows:

Proposed Surface Location:	800' FSL and 1760' FWL
Proposed Bottom Hole Location:	1700' FSL and 1300' FWL (within a 50' radius)
True Veritcal Depth:	Approx. 4200'
Measured Depth:	Approx. 4300'

The well is approved at a legal location, but is only 1820' west of the NRI Carracas Unit 13 A #15 (completed 3/2/89) and approximately 1900' north northeast of the NRI Carracas Unit 24 A #4 (completed 4/11/89). Due to archeological and topographic considerations the well cannot be located at a location more to the north and west, which will be a more desirable target, geologically.

This well is in Nassau's Carracas Unit. All offsetting operators, as shown on the attached lease map, have been notified of this application by certified mail. Kindermac Partners and Jerome P. McHugh are operating affiliates with Nassau Resources, Inc. Although Amoco Production Co. is a party to the unit, they have also been notified.

Also attached are copies of the C-102 plat, a topographic map (showing both the surface and bottom hole locations) and a schematic of the well bore.

Please contact me immediately if anything further is required to complete this application.

Thank you,

Fran Perrin

Fran Perrin

xc: Ernie Busch, NMOCD
Amoco Production Co.
Celeste C. Grynberg
Jerome P. McHugh and
Kindermac Partners

Attachments

Main Office
Jerome P. McHugh & Associates
Operating Affiliate: Nassau Resources, Inc.
650 South Cherry, Suite 1225
Denver, Colorado 80222
(303) 321-2111

...IL CONSERVATION DIVISION

...ATE OF NEW MEXICO
...Y AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-102
Revised 10-1-78

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
Nassau Resources, Inc.	Carracas Unit 13 A	14

Unit Letter	Section	Township	Range	County
N	13	32 North	5 West	Rio Arriba

Actual Footage Location of Well:
800 feet from the SOUTH line and 1760 feet from the WEST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
7405	Fruitland	Basin Fruitland Coal	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

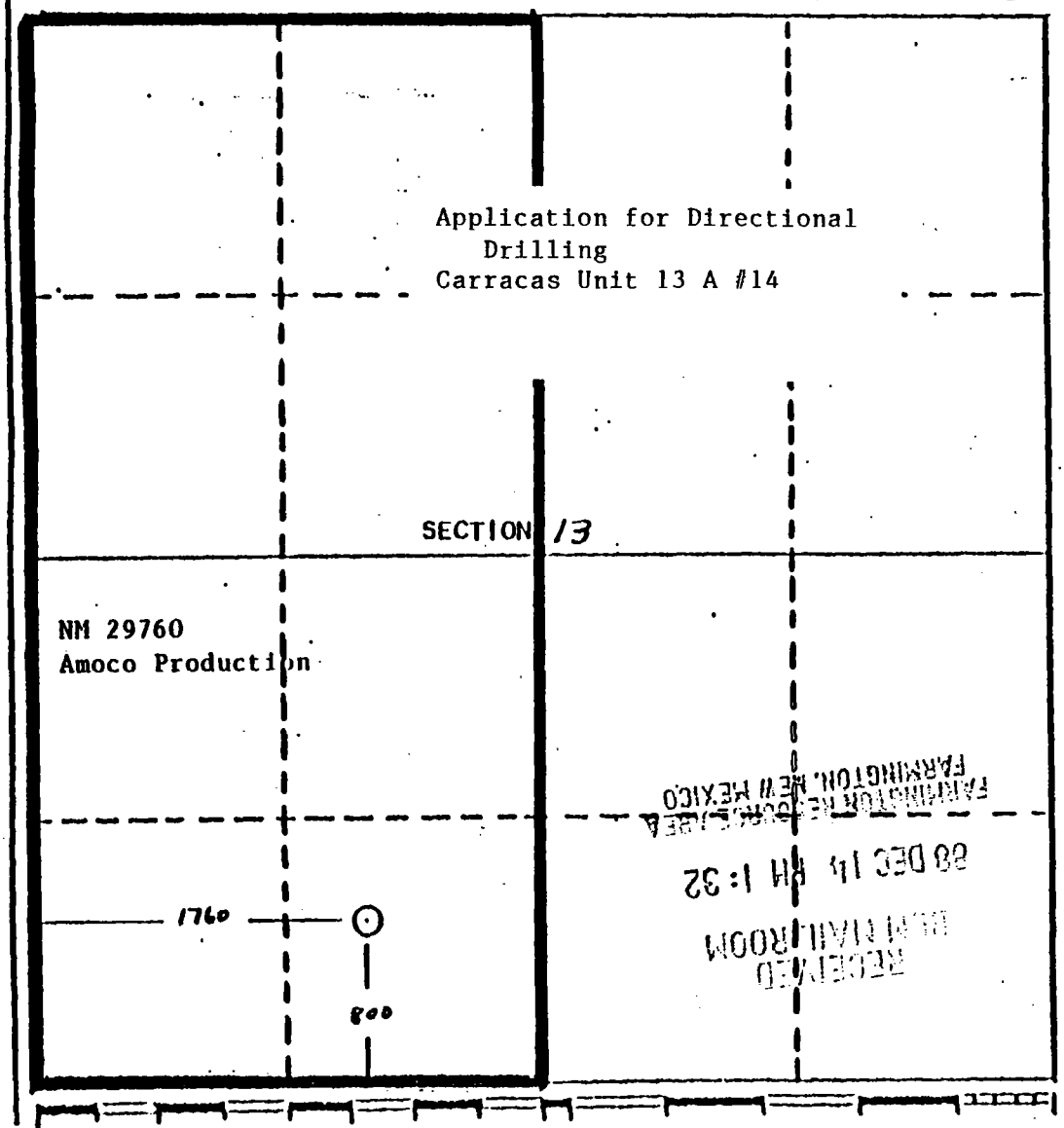
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

[X] Yes [ ] No If answer is "yes," type of consolidation Carracas Unit - 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 interests, has been approved by the Division.



CERTIFICATION

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

Fran Perrin

Name: Fran Perrin

Position: Admin. Asst.

Company: Nassau Resources, Inc.

Date: 12/8/88

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.

EDGAR L. RISENHOOVER
NEW MEXICO
5979
REGISTERED LAND SURVEYOR

Date Surveyed: 5-26-88

Registered Professional Engineer and/or Land Surveyor

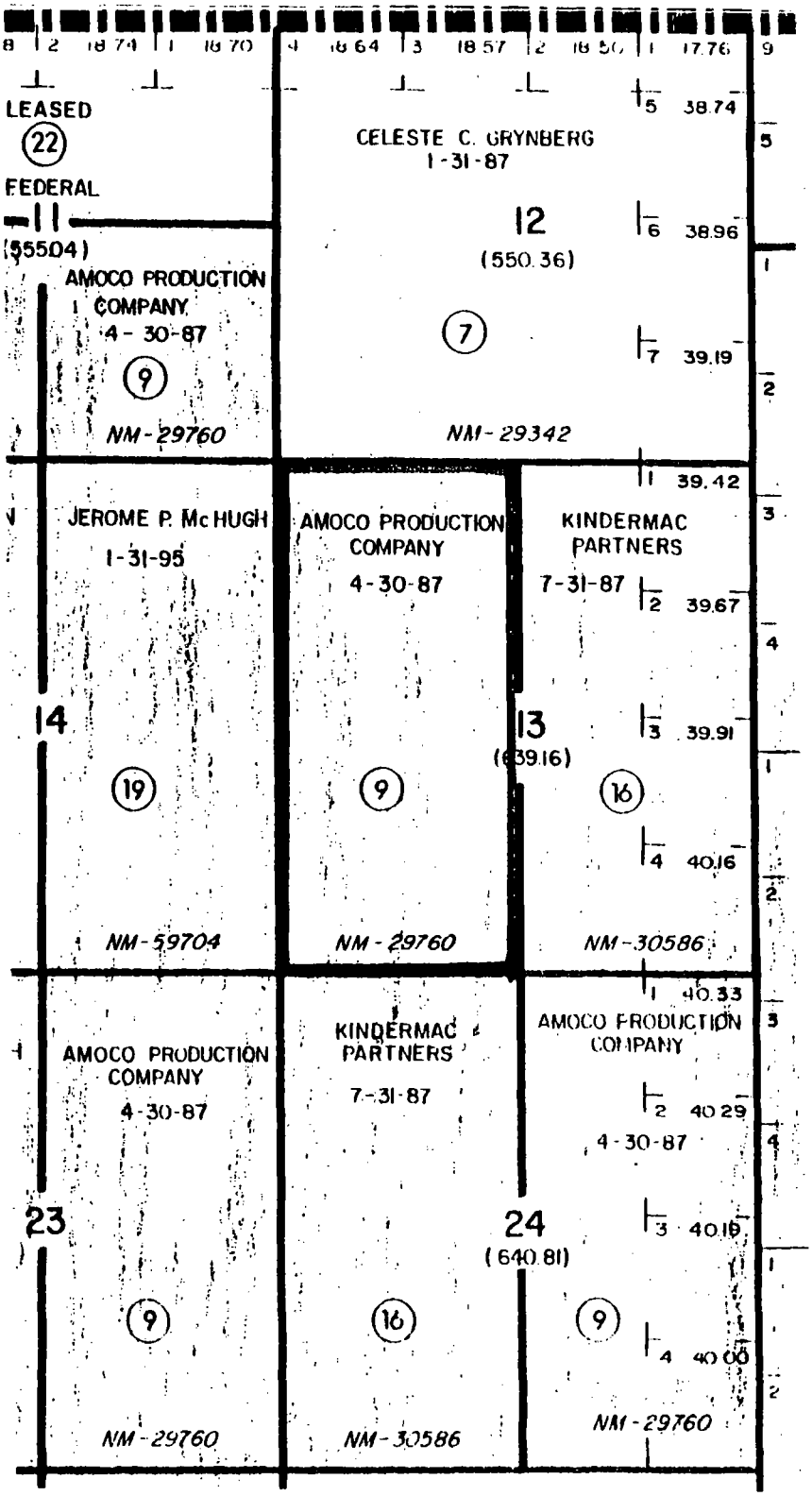
Edgar L. Risenhoover

Certificate No. 5979

Edgar L. Risenhoover, [illegible]

LEASE PLAT

Township 32 North, Range 5 West, NMPM, Rio Arriba County, New Mexico

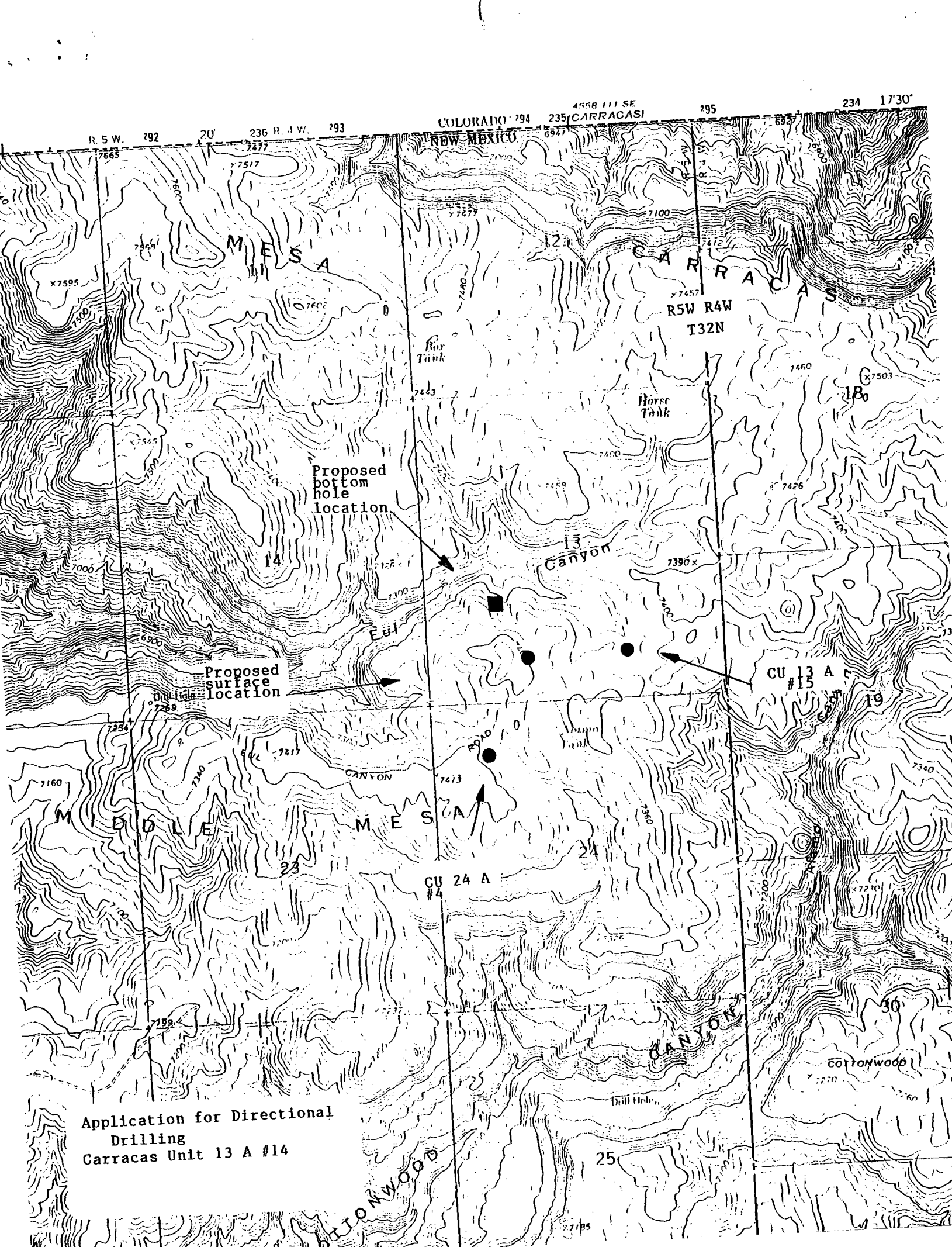


OFFSETTING OPERATOR:
Celeste C. Grynberg

PARTY TO THE UNIT:
Amoco Production Co.

OPERATING AFFILIATES:
Jerome P. McHugh
Kindermac Partners

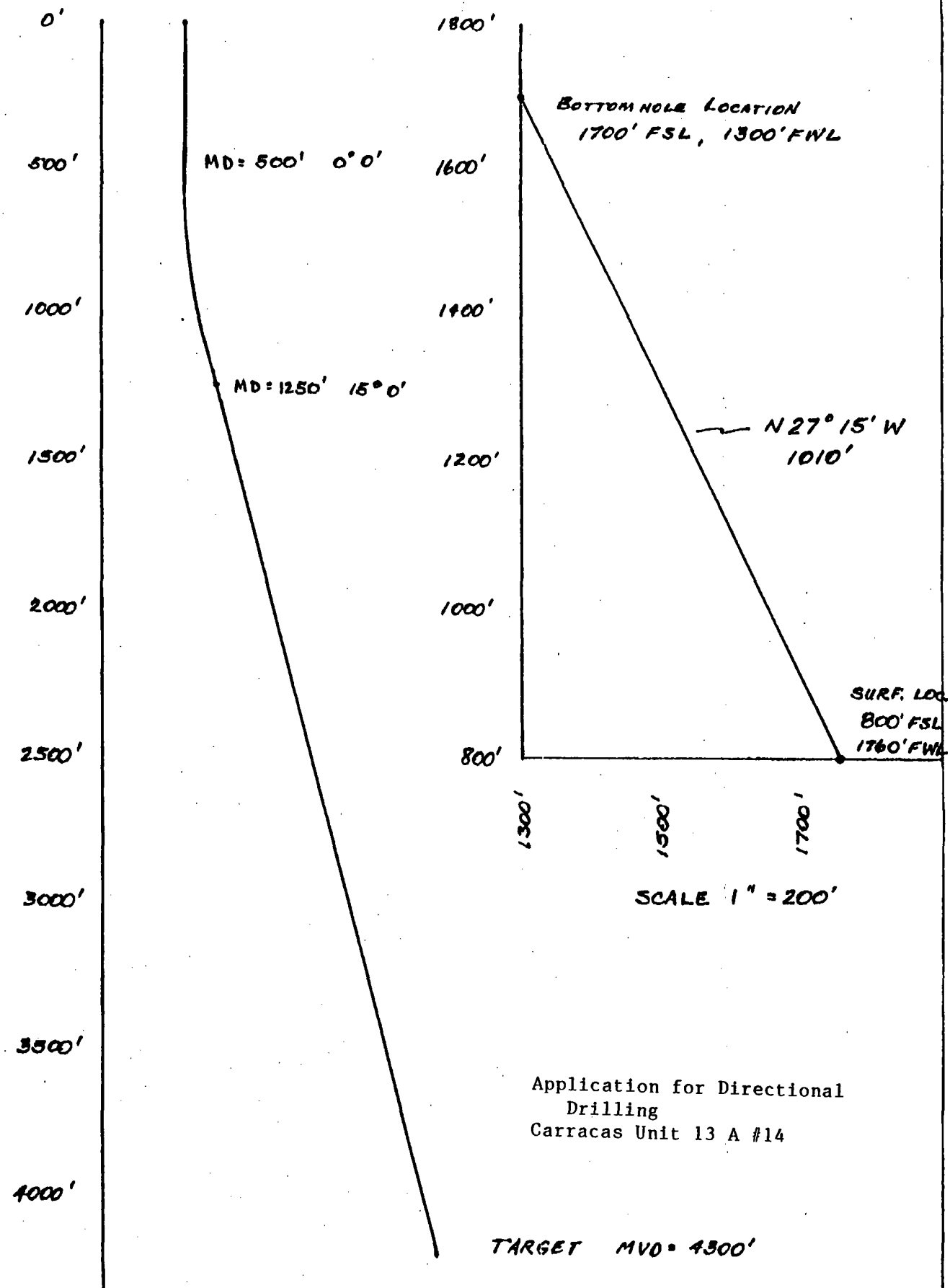
Application for Directional
Drilling
Carracas Unit 13 A #14


Proposed bottom hole location
Proposed surface location
CU 13 A #15
CU 24 A #4
MESA
CARRACAS
MIDDLE MESA
CANYON
COTTONWOOD
Horse Tank
R5W R4W
T32N
Application for Directional Drilling
Carracas Unit 13 A #14

NASSAU RESOURCES, INC.

WELL 13A-14

800'FSL, 1760'FWL SEC. 13
T 32N, R05 W
RIO ARRIBA CO., NM



Application for Directional
Drilling
Carracas Unit 13 A #14

Jerome P. McHugh & Associates
P O Box 809, Farmington, New Mexico 87499-0809
(505) 326-7793

July 24, 1989

RECEIVED

JUL 26 1989

OIL CONSERVATION DIV.
SANTA FE

New Mexico Oil Conservation Division
Attn: Michael Stogner
P O Box 2088
Santa Fe, New Mexico 87504

RE: Application for Administrative Approval of Directional Drilling
Nassau Resources, Inc., Carracas Unit 13 A #14
Section 13, T32N, R5W, NMPM
Rio Arriba County, New Mexico

Dear Mr. Stogner:

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Proposed Surface Location:	800' FSL and 1760' FWL
Proposed Bottom Hole Location:	1700' FSL and 1300' FWL (within a 50' radius)
True Veritcal Depth:	Approx. 4200'
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The well is approved at a legal location, but is only 1820' west of the NRI Carracas Unit 13 A #15 (completed 3/2/89) and approximately 1900' north northeast of the NRI Carracas Unit 24 A #4 (completed 4/11/89). Due to archeological and topographic considerations the well cannot be located at a location more to the north and west, which will be a more desirable target, geologically.

This well is in Nassau's Carracas Unit. All offsetting operators, as shown on the attached lease map, have been notified of this application by certified mail. Kindermac Partners and Jerome P. McHugh are operating affiliates with Nassau Resources, Inc. Although Amoco Production Co. is a party to the unit, they have also been notified.

Also attached are copies of the C-102 plat, a topographic map (showing both the surface and bottom hole locations) and a schematic of the well bore.

Please contact me immediately if anything further is required to complete this application.

Thank you,

Fran Perrin

Fran Perrin

xc: Ernie Busch, NMOCD
Amoco Production Co.
Celeste C. Grynberg
Jerome P. McHugh and
Kindermac Partners

Attachments

Main Office
Jerome P. McHugh & Associates
Operating Affiliate: Nassau Resources, Inc.
650 South Cherry, Suite 1225
Denver, Colorado 80222
(303) 321-2111

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

Form C-102
Revised 10-1-78

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
Nassau Resources, Inc.	Carracas Unit 13 A	14

Unit Letter	Section	Township	Range	County
N	13	32 North	5 West	Rio Arriba

Actual Footage Location of Well:
800 feet from the SOUTH line and 1760 feet from the WEST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
7405	Fruitland	Basin Fruitland Coal	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

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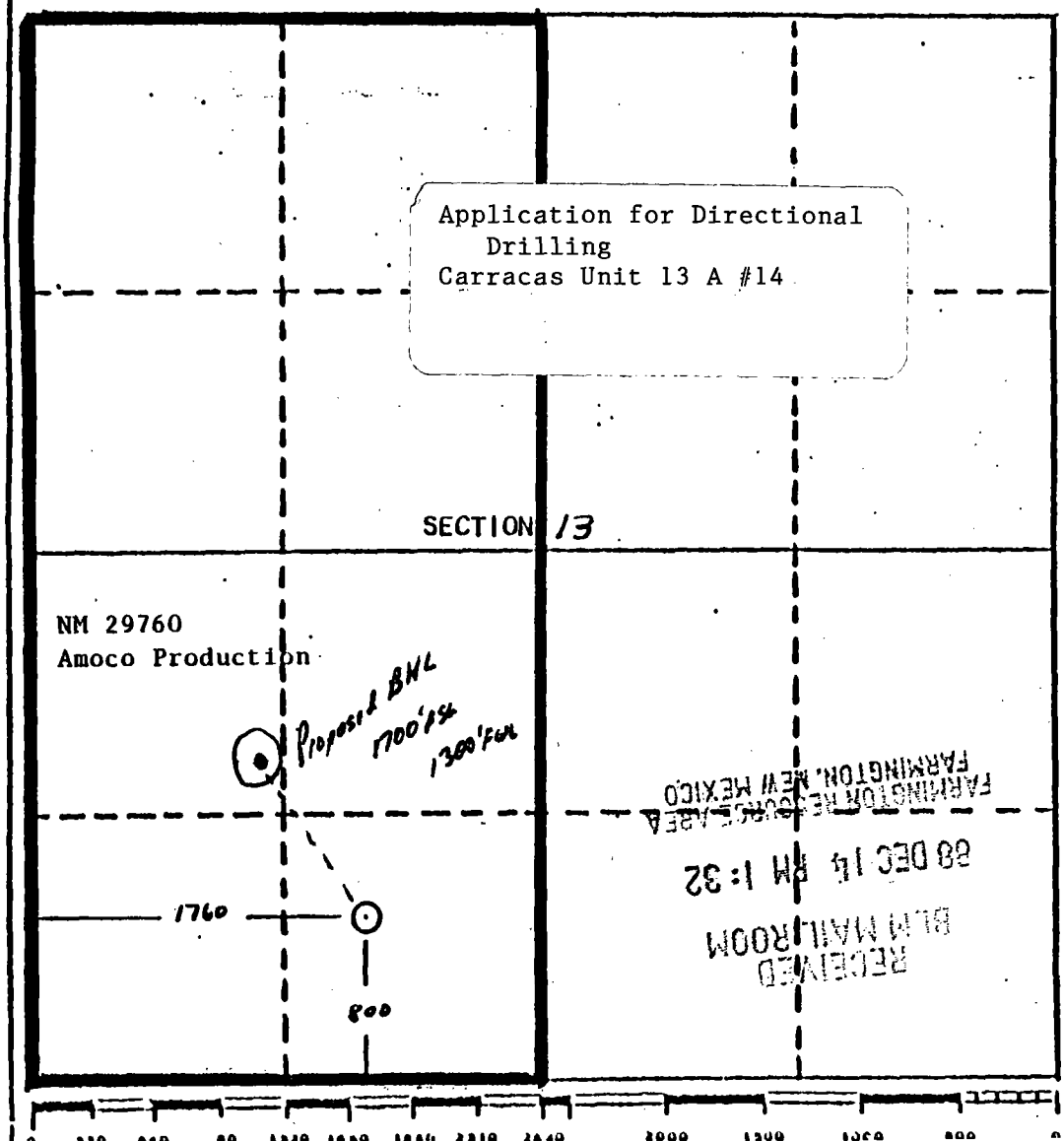


CERTIFICATION

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

Fran Perrin

Name: Fran Perrin

Position: Admin. Asst.

Company: Nassau Resources, Inc.

Date: 12/8/88

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.

EDGAR L. RISENHOOVER
NEW MEXICO
5979
REGISTERED LAND SURVEYOR

Date Surveyed: 5-26-88

Registered Professional Engineer and/or Land Surveyor

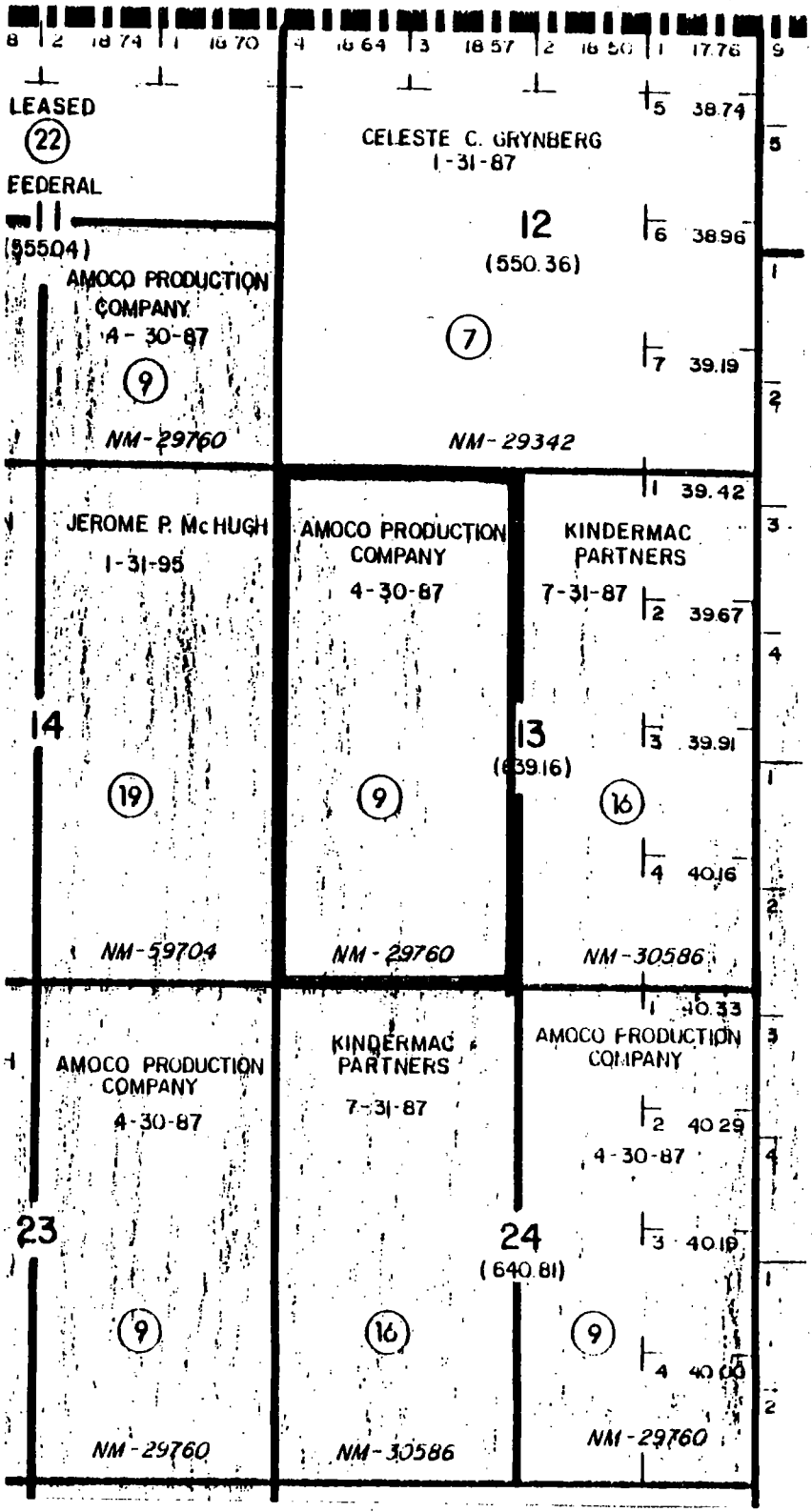
Edgar L. Risenhoover

Certificate No. 5979

Edgar L. Risenhoover L.S.

LEASE PLAT

Township 32 North, Range 5 West, NMPM, Rio Arriba County, New Mexico

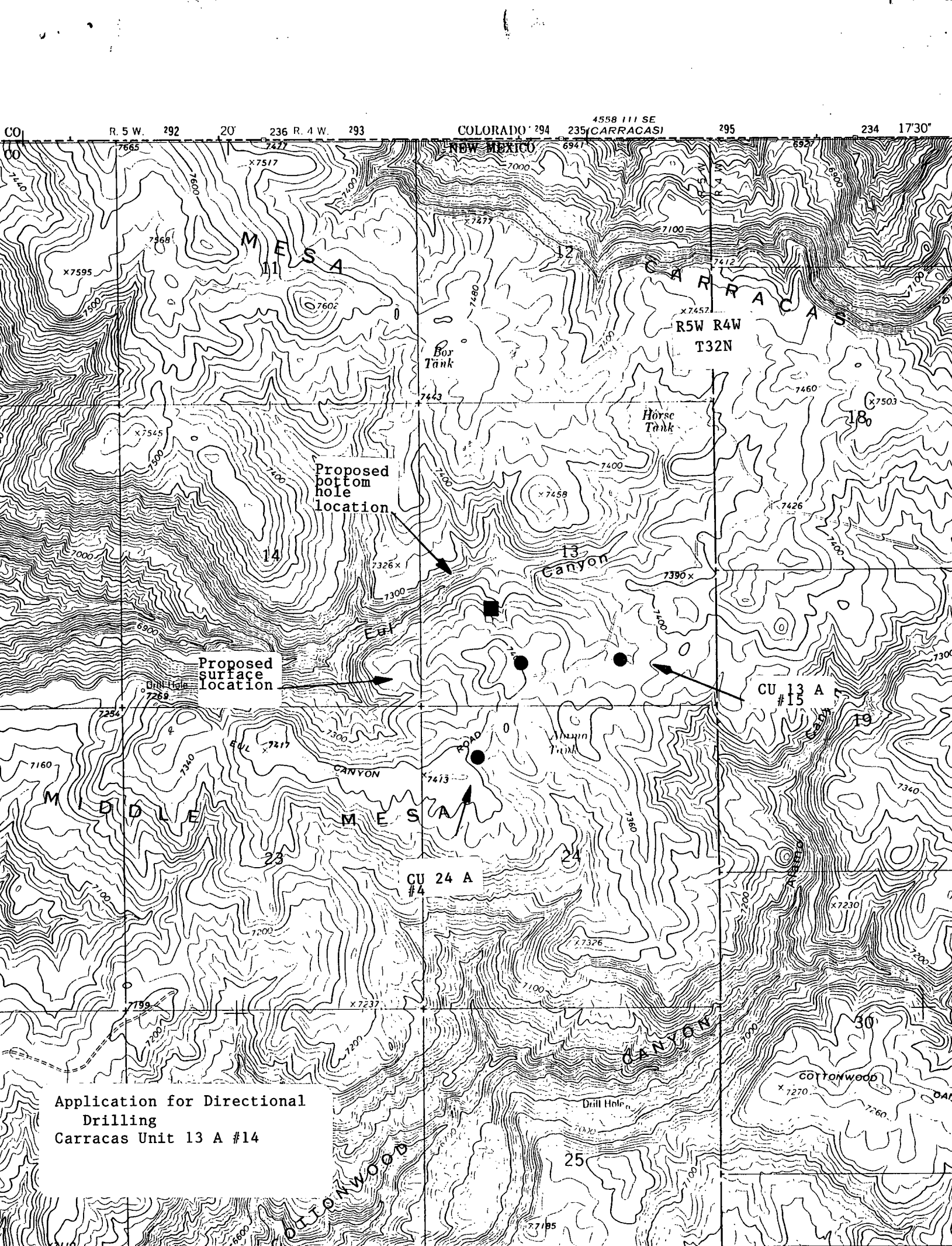


OFFSETTING OPERATOR:
Celeste C. Grynberg

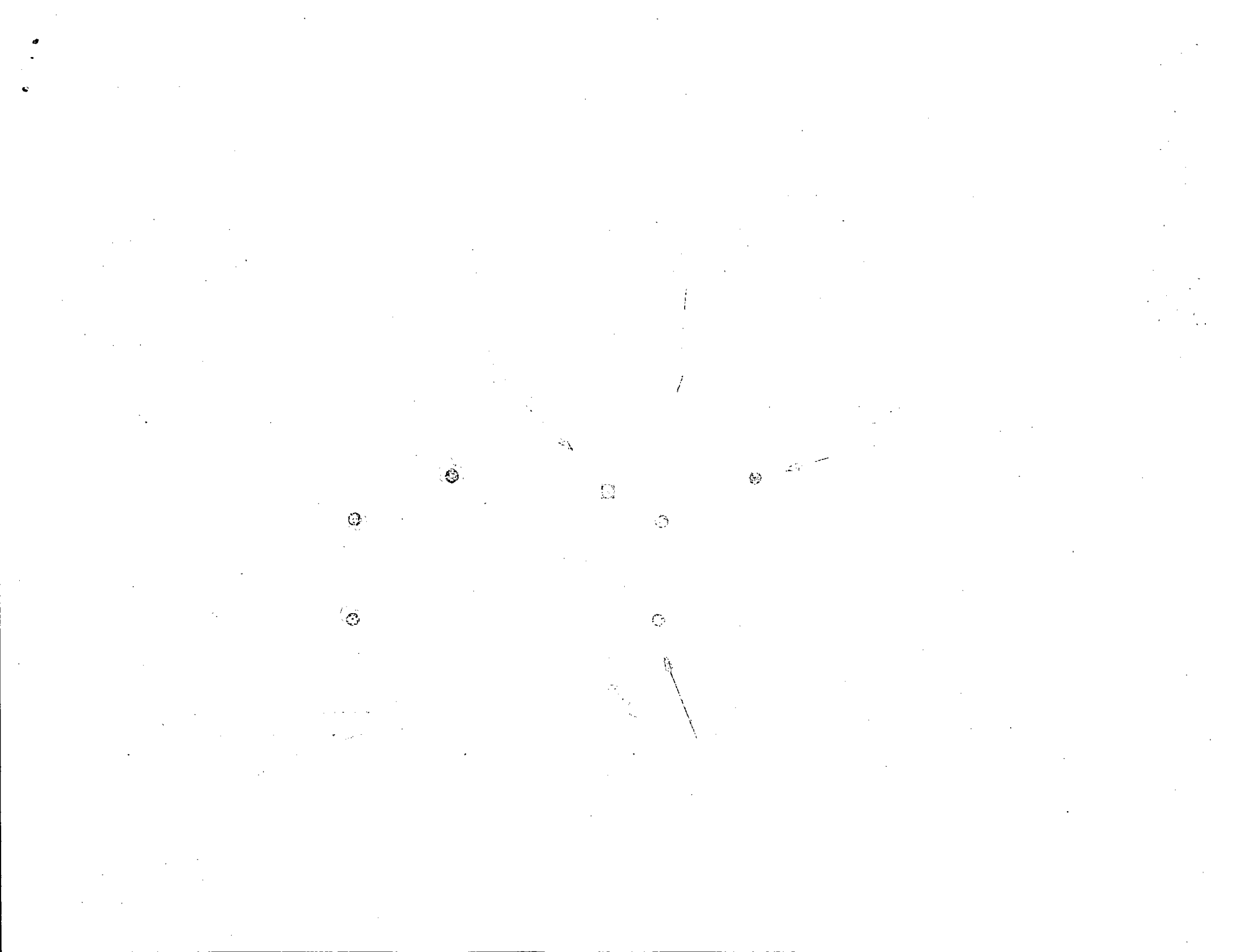
PARTY TO THE UNIT:
Amoco Production Co.

OPERATING AFFILIATES:
Jerome P. McHugh
Kindermac Partners

Application for Directional Drilling
Carracas Unit 13 A #14



Application for Directional Drilling
Carracas Unit 13 A #14



NASSAU RESOURCES, INC.

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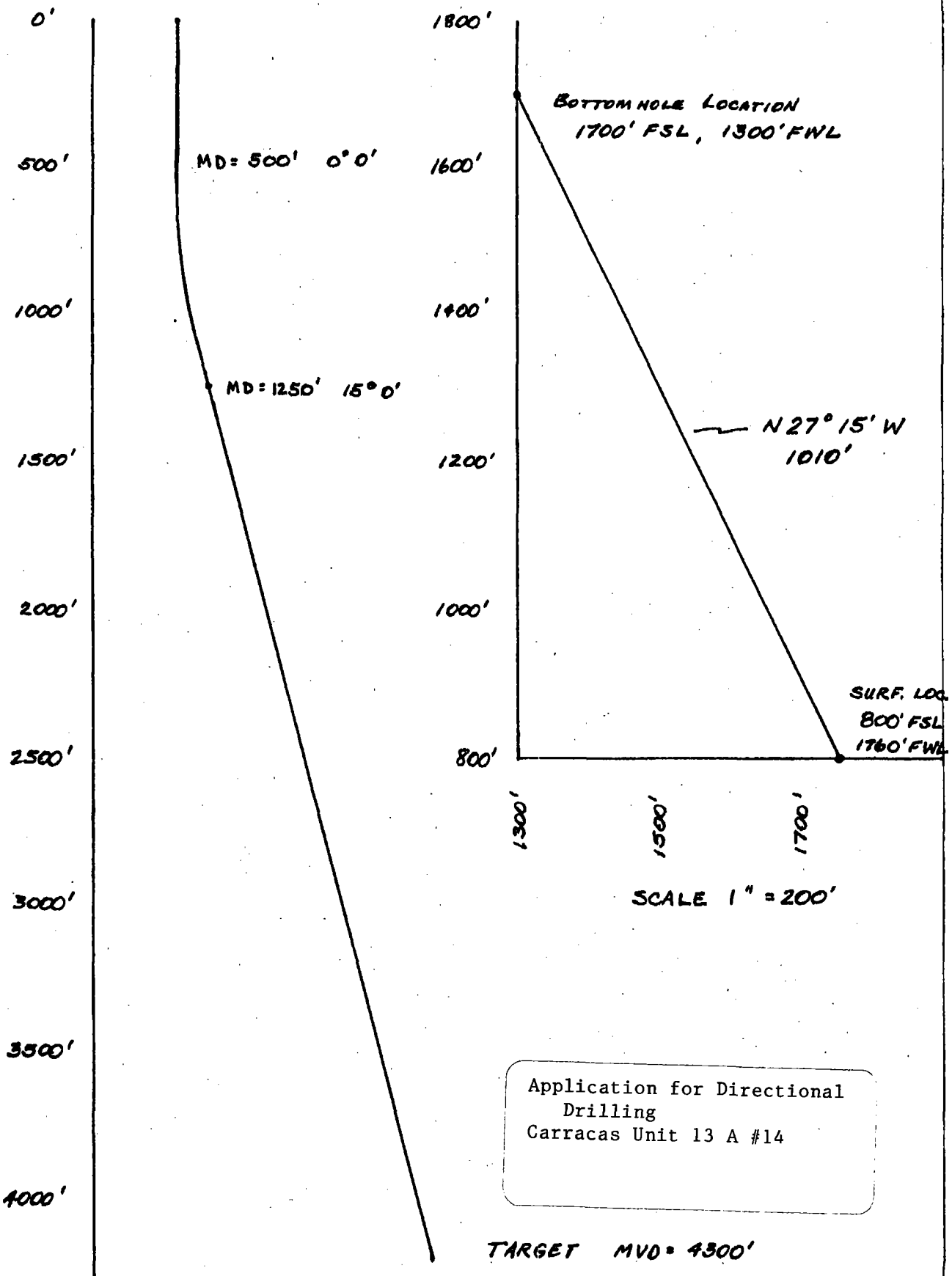
RIO ARRIBA CO., NM



Application for Directional Drilling
Carracas Unit 13 A #14

Jerome P. McHugh & Associates
P O Box 809, Farmington, New Mexico 87499-0809
(505) 326-7793

July 24, 1989

New Mexico Oil Conservation Division
Attn: Michael Stogner
P O Box 2088
Santa Fe, New Mexico 87504

RE: Application for Administrative Approval of
Directional Drilling
Nassau Resources, Inc., Carracas Unit 13 A #14
Section 13, T32N, R5W, NMPM
Rio Arriba County, New Mexico

Dear Mr. Stogner:

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Proposed Bottom Hole Location:	1700' FSL and 1300' FWL (within a 50' radius)
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Thank you,

Fran Perrin

Fran Perrin

xc: Ernie Busch, NMOCD
Amoco Production Co.
Celeste C. Grynberg
Jerome P. McHugh and
Kindermac Partners

Attachments

Main Office
Jerome P. McHugh & Associates
Operating Affiliate: Nassau Resources, Inc.
650 South Cherry, Suite 1225
Denver, Colorado 80222
(303) 321-2111

...IL CONSERVATION DIVISION

...ATE OF NEW MEXICO
...GY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-102
Revised 10-1-78

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
Nassau Resources, Inc.	Carracas Unit 13 A	14

Unit Letter	Section	Township	Range	County
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7405	Fruitland	Basin Fruitland Coal	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

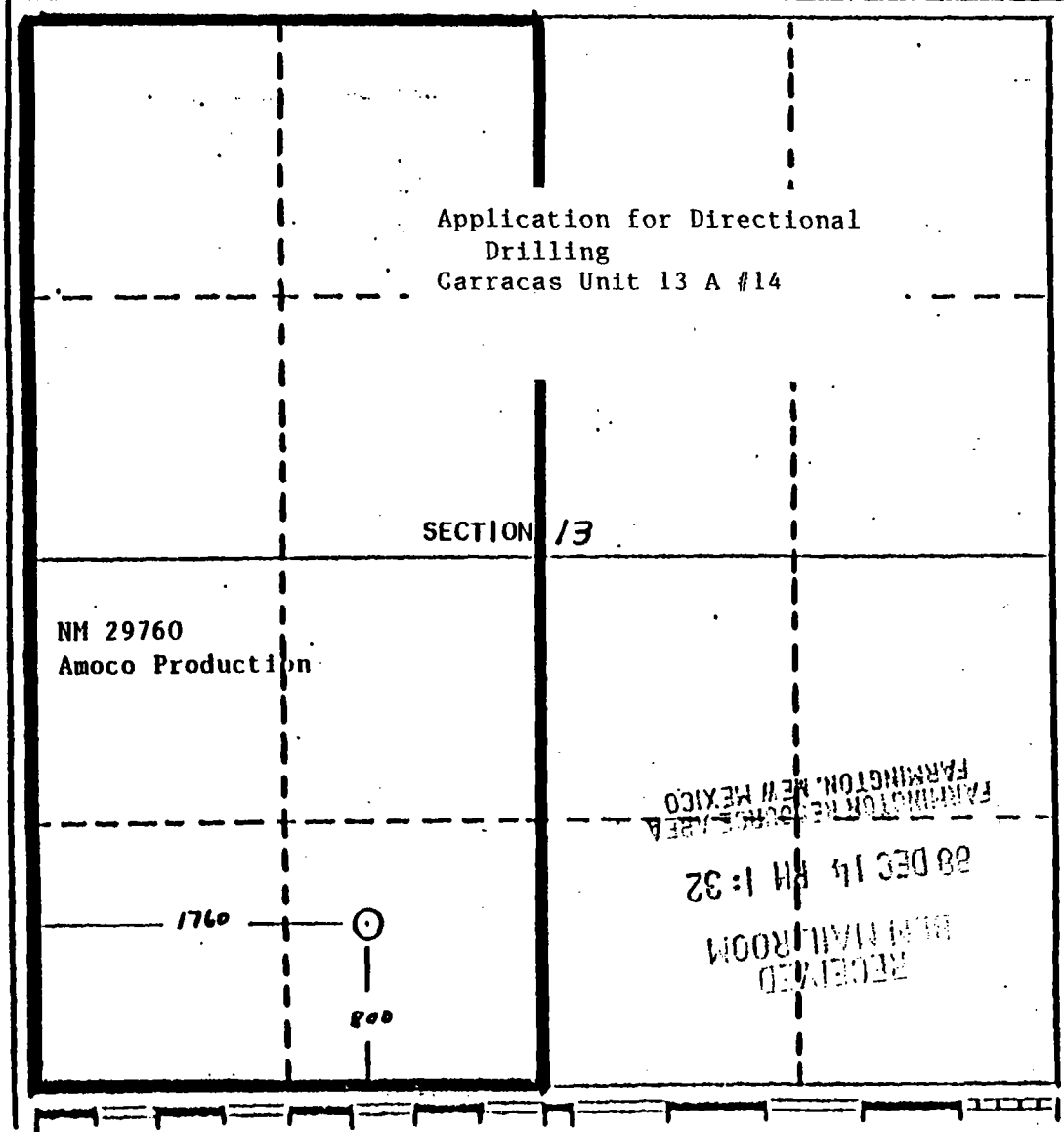
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

[X] Yes [ ] No If answer is "yes," type of consolidation Carracas Unit - 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 interests, has been approved by the Division.



CERTIFICATION

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

Fran Perrin

Name: Fran Perrin

Position: Admin. Asst.

Company: Nassau Resources, Inc.

Date: 12/8/88

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.

EDGAR L. RISENHOOVER
NEW MEXICO
5979
REGISTERED LAND SURVEYOR

Date Surveyed: 5-26-88

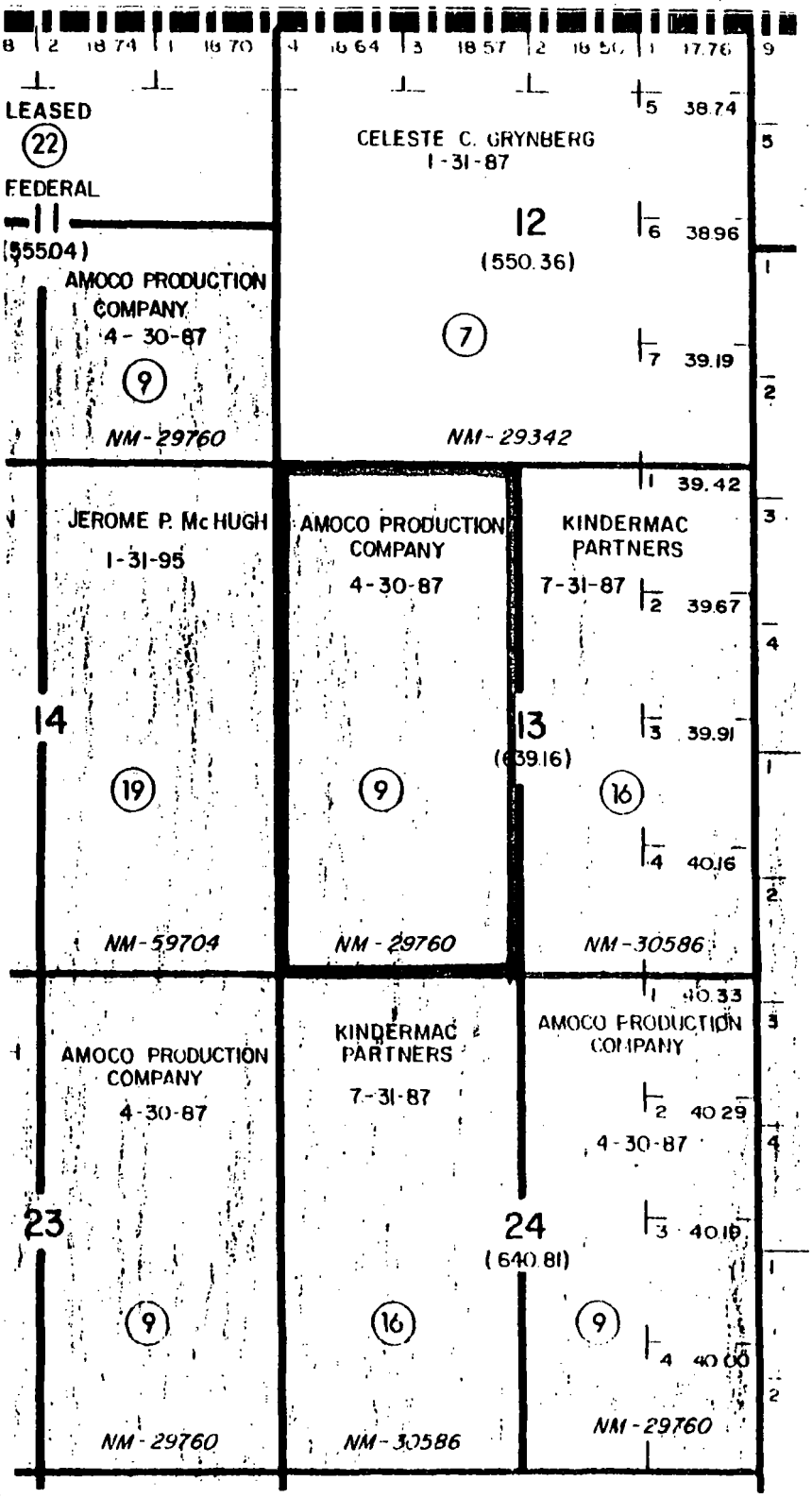
Registered Professional Engineer and/or Land Surveyor

Edgar L. Risenhoover

Certificate No. 5979

LEASE PLAT

Township 32 North, Range 5 West, NMPM, Rio Arriba County, New Mexico

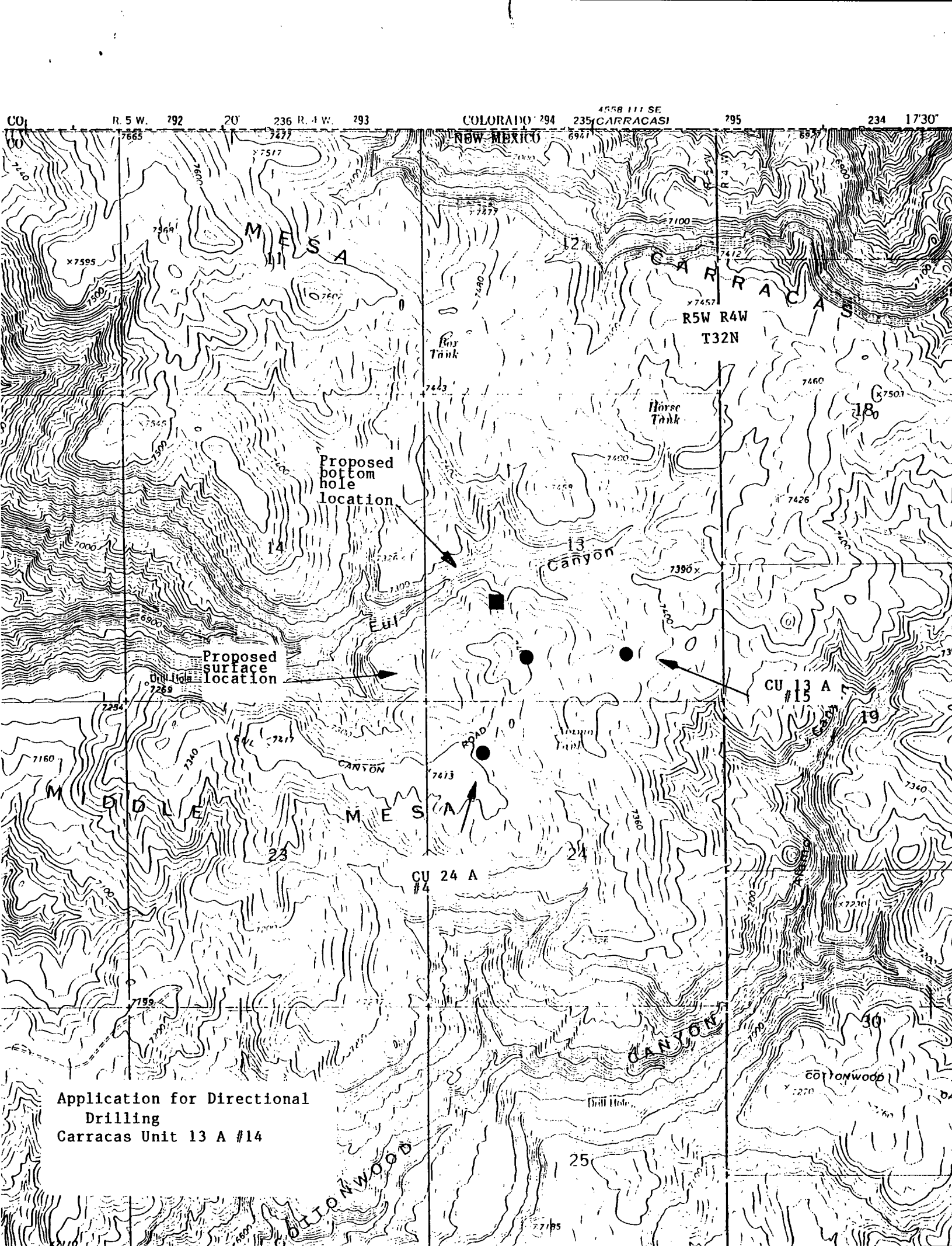


OFFSETTING OPERATOR:
Celeste C. Grynberg

PARTY TO THE UNIT:
Amoco Production Co.

OPERATING AFFILIATES:
Jerome P. McHugh
Kindermac Partners

Application for Directional
Drilling
Carracas Unit 13 A #14

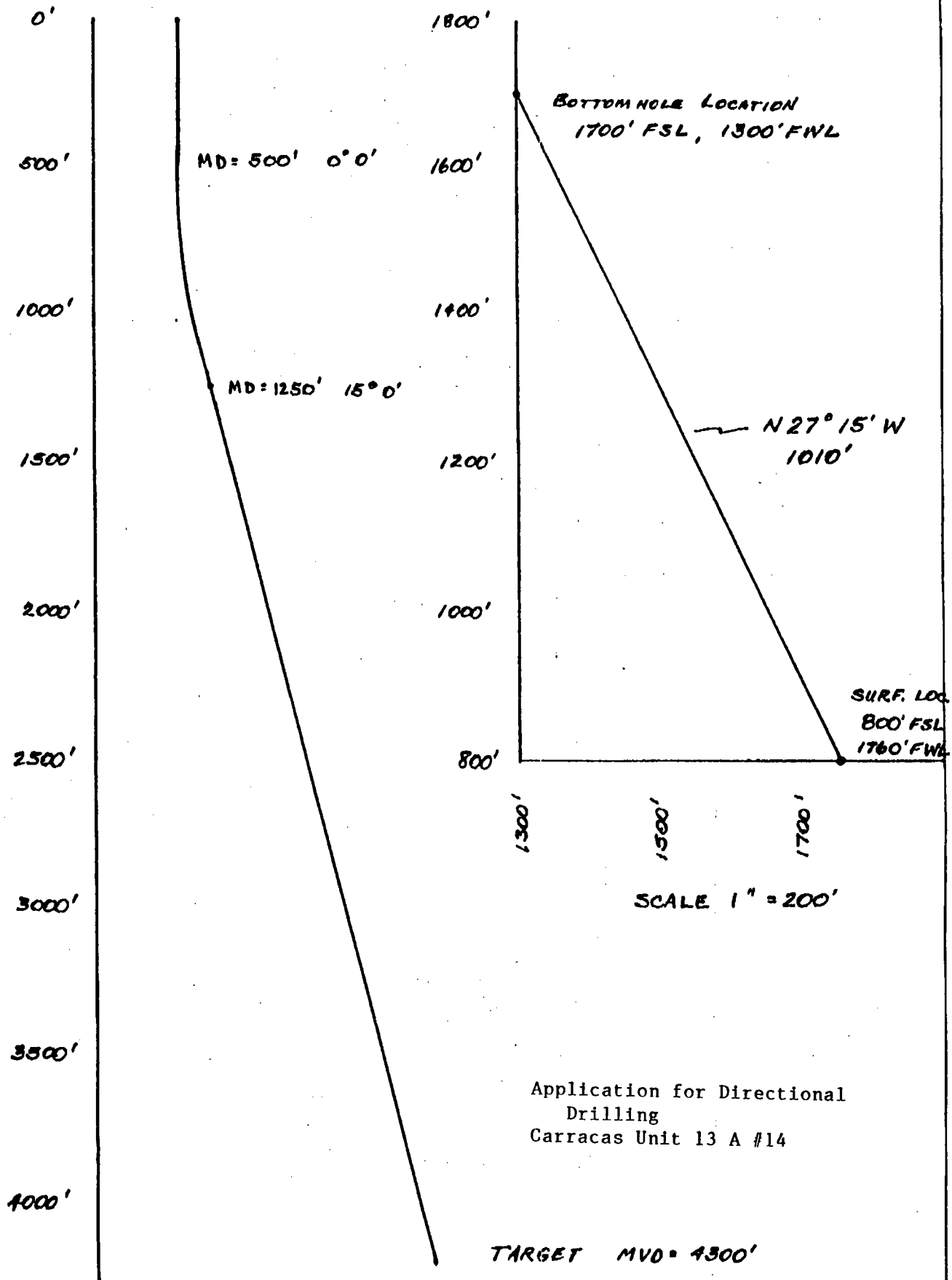


Application for Directional Drilling
Carracas Unit 13 A #14

NASSAU RESOURCES, INC.

WELL 13A-14

800'FSL, 1760'FWL SEC. 13
T 32N, R05 W
RIO ARRIBA CO., NM



Application for Directional Drilling
Carracas Unit 13 A #14

Jerome P. McHugh & Associates
P O Box 809, Farmington, New Mexico 87499-0809
(505) 326-7793

July 24, 1989

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Amoco Production Co.
Attn: J W Hawkins - Land Department, Proration Group
P O 800
Denver, CO 80201

RE: Application for Administrative Approval of
Directional Drilling
Nassau Resources, Inc., Carracas Unit 13 A #14
Section 13, T32N, R5W, NMPM
Rio Arriba County, New Mexico

Dear Mr. Hawkins:

Pursuant to our phone conversation this date, enclosed is a copy of the subject Application for Directional Drilling.

Although Amoco Production Co., is a party to the Nassau Resources, Inc., Carracas Unit, if Amoco has no objection to this application, we request that you notify the Oil Conservation Division as soon as possible. Please send a waiver to the attention of Michael Stogner, New Mexico Oil Conservation Division, P O Box 2088, Santa Fe, New Mexico, 87504.

Please feel free to call if you have any questions.

Thank you,

Fran Perrin

Fran Perrin

Enclosure

xc: NMOCD, Santa Fe, NM ✓

Main Office
Jerome P. McHugh & Associates
Operating Affiliate: Nassau Resources, Inc.
650 South Cherry, Suite 1225
Denver, Colorado 80222
(303) 321-2111

Jerome P. McHugh & Associates
P O Box 809, Farmington, New Mexico 87499-0809
(505) 326-7793

July 24, 1989

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Celeste Grynberg - Grynberg Petroleum
ATTN: Susan Stone
5000 S. Quebec Suite 500
Denver, Colorado 80237

RE: Application for Administrative Approval of
Directional Drilling
Nassal Resources, Inc., Carracas Unit 13 A #14
Section 13, T32N, R5W, NMPM
Rio Arriba County, NM

Dear Ms. Stone:

Pursuant to our phone conversation this date, enclosed is a copy of the subject Application for Directional Drilling.

If you, as an offsetting operator, have no objection, we request that you notify the Oil Conservation Division, Attn: Michael Stogner, P O Box 2088, Santa Fe, New Mexico 87054, as soon as possible.

Please feel free to call if you have any questions.

Thank you,

Fran Perrin

Fran Perrin

Enclosure

xc: NMOCD, Santa Fe, NM ✓

Main Office
Jerome P. McHugh & Associates
Operating Affiliate: Nassau Resources, Inc.
650 South Cherry, Suite 1225
Denver, Colorado 80222
(303) 321-2111

Amoco Production Company

Denver Region
1670 Broadway
P.O. Box 800
Denver, Colorado 80201
303-830-4040

August 3, 1989

Michael Stogner
New Mexico Oil Conservation Division
PO Box 2088
Santa Fe, NM 87504

File: NWA-602-986.511

Waiver of Objection to Nassau Resources, Inc. application to directionally drill Carracas Unit 13 "A" Well No. 14
Section 13-T32N-R5W
Rio Arriba County, New Mexico

Amoco Production Company has no objection to the above referenced application by Nassau Resources, Inc. to directionally drill the Carracas Unit 13 "A" Well No. 14 as proposed.

Sincerely,

J.W. Hawkins

JWH/jb

cc: Fran Perrin
Jerome P. McHugh and Associates
PO Box 809
Farmington, NM 87499

J.L. Spitler - Building

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

GARREY CARRUTHERS
GOVERNOR

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

Date: 8-1-89

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

RECEIVED
AUG 4 1989
OIL CONSERVATION DIV.
SANTA FE

Re: Proposed MC_____
Proposed DHC_____
Proposed NSL_____
Proposed SWD_____
Proposed WFX_____
Proposed PMX_____

Gentlemen: DD X

I have examined the application dated 7-26-89
for the Nassau Resources, Inc. - Carracas Unit 13 #4
Operator Lease & Well No.
N-13-32-5 and my recommendations are as follows:
Unit, S-T-R

IF AT ALL POSSIBLE PLEASE APPROVE THIS APPLICATION, THE OPERATOR IS TRYING TO AVOID INTERFERENCE

Yours truly,

D Burd

GRYNBERG PETROLEUM COMPANY

5000 SOUTH QUEBEC ● SUITE 500 ● DENVER, COLORADO 80237-2707 USA ● PHONE 303-850-7490

TELEX: 510 600 2180 ENERGY DVR
TELECOPIER: 303-850-7498

July 26, 1989

Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87054

ATTN; Michael Stogner

Re: Nassau Resources Application for
Approval for Directional Drilling
Carracas Unit 13A & 14
Rio Arriba County, New Mexico

Gentlemen:

Celeste C. Grynberg as offsetting operator to the captioned wells has reviewed Nassau Resources application to the commision and has no objection.

Sincerely,

GRYNBERG PETROLEUM COMPANY

Susan Stone

Susan Stone

cc: Nassau Resources
P.O. Box 809
Farmington, New Mexico 87499-0809
Fran Perrin

SS/ah

GRYNBERG PETROLEUM COMPANY

5000 SOUTH QUEBEC ○ SUITE 500 ○ DENVER, COLORADO 80237-2707 USA ○ PHONE 303-850-7490

TELEX: 510 600 2180 ENERGY DVR
TELECOPIER: [illegible]

TELECOPY MESSAGE

DATE: July 26, 1989 TIME: 11:00 a.m. MST

TO: Oil Conservation Division

FROM: Susan Stone Grynberg Petroleum Company

SUBJECT: Nassau Resources Application
for Approval for Directional Drilling
Carracas Unit 13A & 14

NUMBER OF PAGES FOLLOWING THIS COVER LETTER: 1

IF YOU NEED A CONFIRMATION OR PAGES RESENT,
PLEASE CONTACT OUR OFFICE AT THE FOLLOWING NUMBER:

(303) 850-7490

Ask for Alice

Telecopier Telephone Number: (303) 850-7498
Panafax UF-600 Series

GRYNBERG PETROLEUM COMPANY

5000 SOUTH QUEBEC ○ SUITE 500 ○ DENVER, COLORADO 80237-2707 USA ○ PHONE 303-850-7480

TELEX: 510 600 2180 ENERGY DVR
TELECOPIER: 303-850-7498

July 26, 1989

Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87054

ATTN; Michael Stogner

Re: Nassau Resources Application for
Approval for Directional Drilling
Carracas Unit 13A & 14
Rio Arriba County, New Mexico

Gentlemen:

Celeste C. Grynberg as offsetting operator to the captioned wells has reviewed Nassau Resources application to the commision and has no objection.

Sincerely,

GRYNBERG PETROLEUM COMPANY

Susan Stone

Susan Stone

cc: Nassau Resources
P.O. Box 809
Farmington, New Mexico 87499-0809
Fran Perrin

SS/ah

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

August 21, 1989

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

Interstate Oil Compact Commission
P.O. Box 53127
Oklahoma City, OK 73105

Attention: Lee Hull

Dear Ms. Hull:

Following is the data for New Mexico for the National Stripper Well Survey for January 1, 1988.

Number of Stripper Wells	14,723
1988 Production from Stripper Wells	14,653,084 Barrels Oil
Abandonments	1,087
Average Daily Production Per Well for 1988	2.73 Barrels Oil Per Day
Acreage	703,520 Acres
Total 1988 Oil Production	67,865,597 Barrels Oil

In addition to the above data, the following is also furnished for your information.

Injection project recovery statewide for 1988 was 29,418,722 barrels of oil or 43.35% of the total crude oil production from this statewide injection project recovery production figure 65.51% or 19,272,393 barrels of oil is from pressure maintenance projects. The remaining 34.49% or 10,146,329 barrels is from waterflood projects. Therefore, waterflood or secondary recovery production would constitute only 14.95% of the total crude production from the State.

Total stripper well production statewide is 14,653,084 barrels or 21.59% of total crude production. Applying the percentage factor to the waterflood, or secondary recovery, it can be estimated that 2,190,592 barrels (10,146,329 barrels times 0.2159) of the secondary recovery production were from stripper wells.

Please contact me if you should have any questions concerning this data.

Sincerely,

Michael E. Stogner
Chief Hearing Officer/Engineer

MES/ag

Southwestern Region

PHILIP R. SETTLES
District Forest Ranger
Jicarilla Ranger District

USDA FOREST SERVICE
Carson National Forest
Jicarilla Ranger Station
Blanco, New Mexico 87412

(505) 326-2036