

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator name and Address MOBIL PRODUCING TX & NM INC.* *MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM P.O. BOX 633, MIDLAND, TX 79702		² OGRID Number
		³ API Number 30-0 30-025-28603
⁴ Property Code 8055	⁵ Property Name NORTH VACUUM ABO	⁶ Well Number 244

⁷ Surface Location									
UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
O	23	17-S	34-E		589'	SOUTH	1859'	EAST	LEA

⁸ Proposed Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
J	23	17-S	34-E		1637'	SOUTH	2688'	WEST	LEA

⁹ Proposed Pool 1					¹⁰ Proposed Pool 2				
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¹¹ Work Type Code P	¹² Well Type Code O	¹³ Cable/Rotary ROTARY	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 4000'
¹⁶ Multiple NO	¹⁷ Proposed Depth 8528'	¹⁸ Formations Abo	¹⁹ Contractor	²⁰ Spud Date 06-30-97

²¹ Proposed Casing and Cement Program					
Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2"	13 3/8"	48# H40	400'	CIRCULATED	SURFACE
12 1/2"	8 5/8"	28# S80	5000'	CIRCULATED	SURFACE
7 7/8"	5 1/2"	15.5# K55	4800-7300'	CIRCULATED	SURFACE
EXISTING	WELLSBORE	17# N80	7300-TD	CIRCULATED	SURFACE

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary

SEE ATTACHMENT

Permit Expires 1 Year From Approval
Date Unless Drilling Underway
Plugback

DD-177 (H)

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.		OIL CONSERVATION DIVISION	
Signature: <i>Shirley Houchins</i>		Approved by: Orig. Signed by Paul Kautz Geologist	
Printed name: SHIRLEY HOCHINS		Title:	
Title: ENVIRONMENTAL & REGULATORY TECHNICIAN		Approval Date: 11-1-97	Expiration Date:
Date: 06-12-97	Phone: (915) 688-2585	Conditions of Approval: Attached ☐	

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

Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-28603		Pool Code	Pool Name NORTH VACUUM Abo	
Property Code 8055	Property Name NORTH VACUUM Abo			Well Number 244
OGRID No.	Operator Name MOBIL PRODUCING TX & NM INC.* *MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM			Elevation 4000'

¹⁰ Surface Location

UI or lot no. O	Section 23	Township 17-S	Range 34-E	Lot. Idn	Feet from the 589'	North/South Line SOUTH	Feet from the 1859'	East/West line EAST	County LEA
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. J	Section 23	Township 17-S	Range 34-E	Lot. Idn	Feet from the 1637'	North/South Line SOUTH	Feet from the 2688'	East/West line WEST	County LEA
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¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON--STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

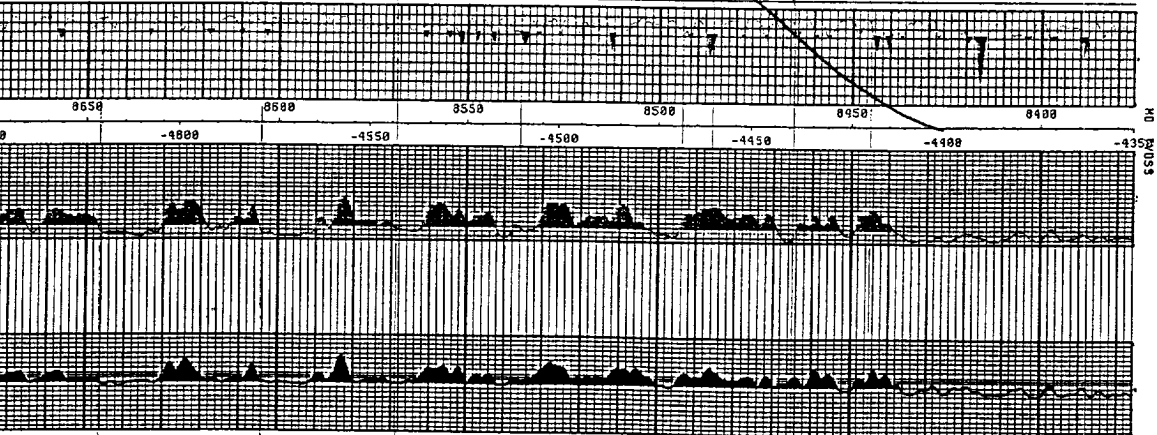
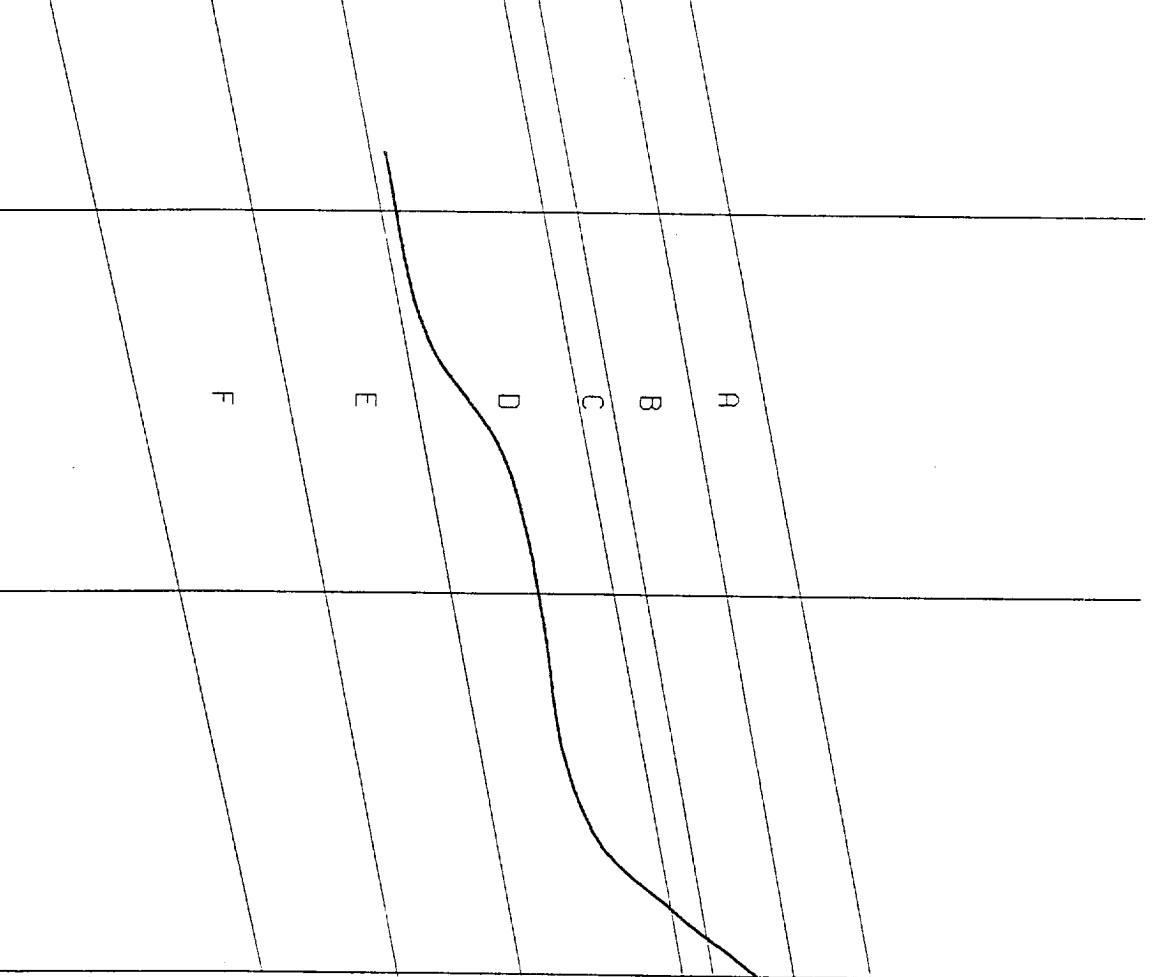
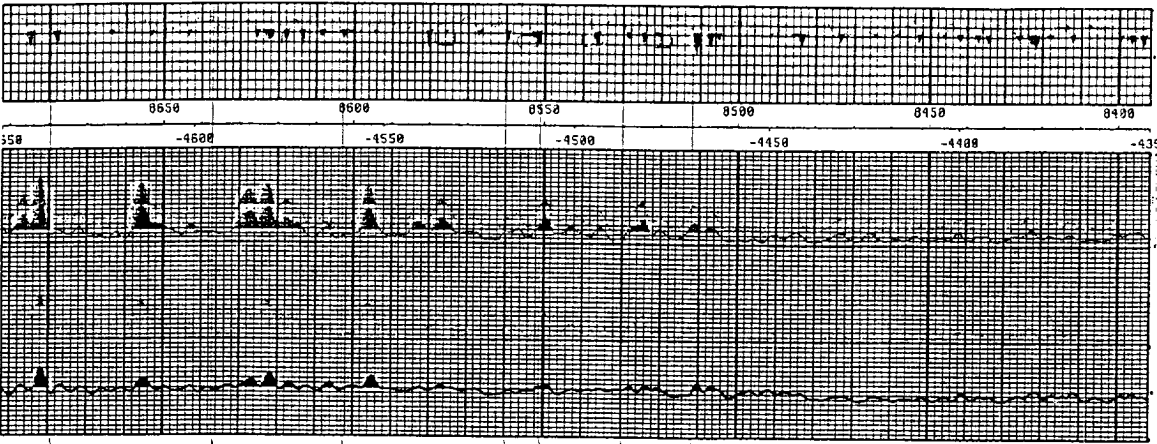
	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. <u>Shirley Houchins</u> Signature SHIRLEY HOUCHINS Printed Name ENV. & REG. TECHNICIAN Title 06-12-97 Date		
	¹⁸ SURVEYOR CERTIFICATION I hereby certify that the 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 belief. Date of Survey Signature and Seal of Professional Surveyor: Certificate Number		

1M

NVNU 245

245

R3



NVNU 244

244

B1

SE

NVAU #244
Lea County, New Mexico

I. GENERAL DRILLING SUMMARY

A. Objective

The objective of this project is to mill a window in the 5-1/2" casing from 8366' to 8375' and drill an open hole lateral in the Abo formation with a vertical section of 1380 ft.

B. Procedure

1. Prepare location and dig workover pit.
2. Bleed well down. MIRU pulling unit and required H₂S equipment.
3. ND wellhead. NU BOP (double ram w/ stripper head). POH w/ production/injection equipment. Set CIBP and whipstock at 8425 and mill window from 8366 to 8375 ft.
4. Drill curve and lateral to a vertical section of 1380 ft. Drilling operations complete.

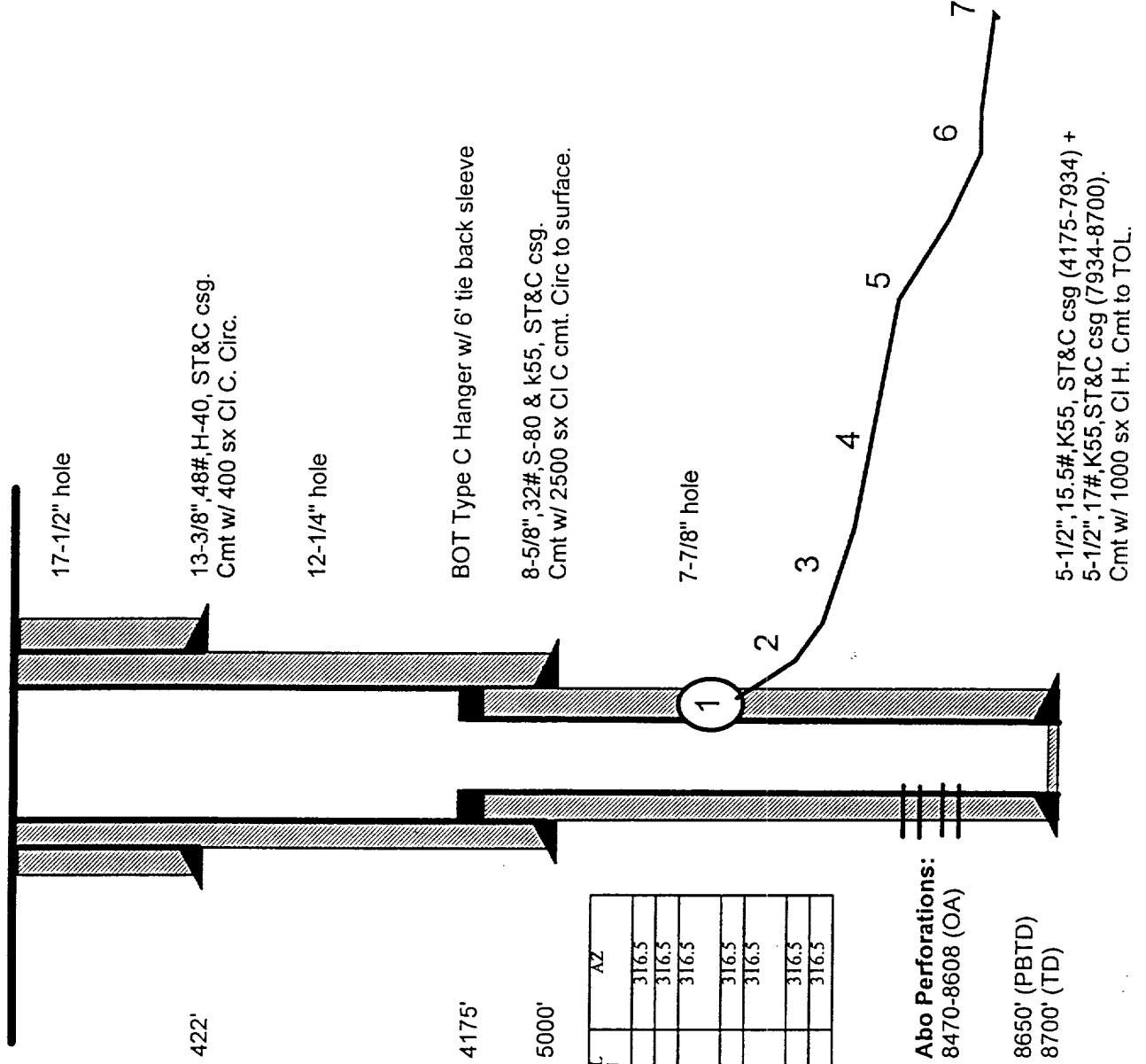
Note: Whipstock and CIBP will be retrieved after lateral section is stimulated.

North Vacuum Abo Unit #244 Proposed

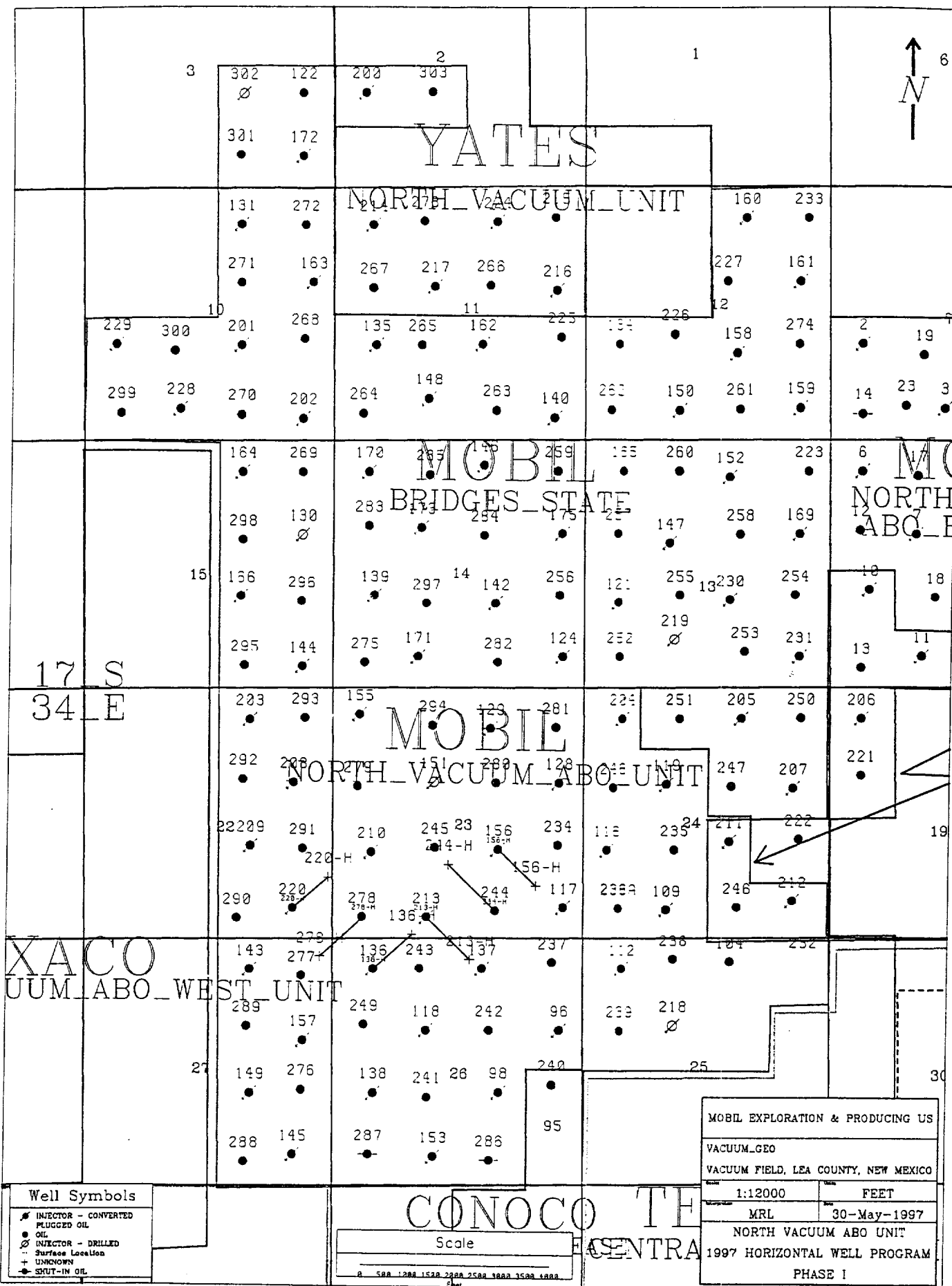
589' FSL & 1859' FEL
Sec 23, T17S - R34E
Lea County, New Mexico

GL = 4028'
DF = 4045'
KB = 17' AGL
Drilled date = 4/84

Lateral	1A1
Radius (ft)	110
Az (deg)	316.5
Build Rate (deg/100)	52.0
EOL TVD (ft)	8572
KOP (ft)	8375
Vert. Displ. (ft)	1380
Window top (ft)	8366
Window btm (ft)	8375



POINT NUMBER	MEASURED DEPTH	TVD	VERTICAL SECTION	AZ
1	8375	8375	0	316.5
2	8540	8485	102	316.5
3	8760	8502	321	316.5
4	8899	8512	460	316.5
5	8909	8513	470	316.5
6	9360	8542	920	316.5
7	9821	8572	1380	316.5



**WELL PLANNING
REPORT**

MOBIL E&P SERVICES, INC.

NVAU #244

**N/A
10-Jun-97**

**SPERRY-SUN DRILLING SERVICE
WELL PROFILE DATA**

**MOBIL E&P SERVICES, INC.
NVAU #244**

**N/A
10-Jun-97**

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE (FL)	DEPARTURE (FL)	VERTICAL SECTION	DOG LEG	TOOL FACE
8375.00	0.000	0.000	8375.00	0.00	0.00	0.00		
8380.00	2.600	316.499	8380.00	0.08 N	0.08 W	0.11		
8390.00	7.800	316.499	8389.95	0.74 N	0.70 W	1.02		
8400.00	13.000	316.499	8399.79	2.05 N	1.94 W	2.82		
8410.00	18.200	316.499	8409.41	4.00 N	3.79 W	5.51		
8420.00	23.400	316.499	8418.76	6.57 N	6.24 W	9.06		
8430.00	28.600	316.499	8427.74	9.75 N	9.25 W	13.44		
8440.00	33.800	316.499	8436.30	13.51 N	12.82 W	18.62		
8450.00	39.000	316.499	8444.34	17.81 N	16.90 W	24.56		
8460.00	44.200	316.499	8451.82	22.63 N	21.47 W	31.19		
8470.00	49.400	316.499	8458.66	27.91 N	26.49 W	38.48		
8480.00	54.600	316.499	8464.81	33.63 N	31.91 W	46.36		
8490.00	59.800	316.499	8470.23	39.72 N	37.69 W	54.76		
8500.00	65.000	316.499	8474.86	46.15 N	43.79 W	63.62		
8510.00	70.200	316.499	8478.67	52.85 N	50.15 W	72.86		
8520.00	75.400	316.499	8481.63	59.78 N	56.73 W	82.41		
8530.00	80.600	316.499	8483.70	66.87 N	63.46 W	92.19		
8539.75	85.668	316.499	8484.87	73.89 N	70.12 W	101.86	52.000	316.499
8540.00	85.668	316.499	8484.89	74.07 N	70.29 W	102.11		
8550.00	85.668	316.499	8485.64	81.30 N	77.16 W	112.09		
8560.00	85.668	316.499	8486.40	88.54 N	84.02 W	122.06		
8570.00	85.668	316.499	8487.15	95.77 N	90.88 W	132.03		
8580.00	85.668	316.499	8487.91	103.00 N	97.75 W	142.00		
8590.00	85.668	316.499	8488.67	110.23 N	104.61 W	151.97		
8600.00	85.668	316.499	8489.42	117.47 N	111.48 W	161.94		
8610.00	85.668	316.499	8490.18	124.70 N	118.34 W	171.91		
8620.00	85.668	316.499	8490.93	131.93 N	125.20 W	181.89		
8630.00	85.668	316.499	8491.69	139.17 N	132.07 W	191.86		
8640.00	85.668	316.499	8492.44	146.40 N	138.93 W	201.83		
8650.00	85.668	316.499	8493.20	153.63 N	145.80 W	211.80		
8660.00	85.668	316.499	8493.95	160.87 N	152.66 W	221.77		
8670.00	85.668	316.499	8494.71	168.10 N	159.52 W	231.74		
8680.00	85.668	316.499	8495.46	175.33 N	166.39 W	241.71		
8690.00	85.668	316.499	8496.22	182.56 N	173.25 W	251.69		
8700.00	85.668	316.499	8496.97	189.80 N	180.12 W	261.66		
8710.00	85.668	316.499	8497.73	197.03 N	186.98 W	271.63		
8720.00	85.668	316.499	8498.49	204.26 N	193.84 W	281.60		
8730.00	85.668	316.499	8499.24	211.50 N	200.71 W	291.57		
8740.00	85.668	316.499	8500.00	218.73 N	207.57 W	301.54		
8750.00	85.668	316.499	8500.75	225.96 N	214.44 W	311.51		
8760.00	85.668	316.499	8501.51	233.19 N	221.30 W	321.49		
8770.00	85.668	316.499	8502.26	240.43 N	228.16 W	331.46		
8780.00	85.668	316.499	8503.02	247.66 N	235.03 W	341.43		
8790.00	85.668	316.499	8503.77	254.89 N	241.89 W	351.40		
8800.00	85.668	316.499	8504.53	262.13 N	248.76 W	361.37		

**PERRY-SUN DRILLING SERVICE
WELL PROFILE DATA**

**MOBIL E&P SERVICES, INC.
NVAU #244**

**N/A
10-Jun-97**

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE (FL)	DEPARTURE (FL)	VERTICAL SECTION	DOG LEG	TOOL FACE
8810.00	85.668	316.499	8505.28	269.36 N	255.62 W	371.34		
8820.00	85.668	316.499	8506.04	276.59 N	262.48 W	381.31		
8830.00	85.668	316.499	8506.79	283.83 N	269.35 W	391.29		
8840.00	85.668	316.499	8507.55	291.06 N	276.21 W	401.26		
8850.00	85.668	316.499	8508.31	298.29 N	283.08 W	411.23		
8860.00	85.668	316.499	8509.06	305.52 N	289.94 W	421.20		
8870.00	85.668	316.499	8509.82	312.76 N	296.80 W	431.17		
8880.00	85.668	316.499	8510.57	319.99 N	303.67 W	441.14		
8890.00	85.668	316.499	8511.33	327.22 N	310.53 W	451.12		
8898.91	85.668	316.499	8512.00	333.67 N	316.65 W	460.00	0.000	0.000
8898.91	85.668	316.499	8512.00	333.67 N	316.65 W	460.00	0.000	0.000
8900.00	85.733	316.499	8512.08	334.46 N	317.40 W	461.09		
8909.04	86.275	316.501	8512.71	340.99 N	323.60 W	470.10	6.000	0.168
8910.00	86.275	316.501	8512.77	341.69 N	324.26 W	471.06		
8920.00	86.275	316.501	8513.42	348.93 N	331.13 W	481.04		
8930.00	86.275	316.501	8514.07	356.17 N	338.00 W	491.02		
8940.00	86.275	316.501	8514.72	363.41 N	344.87 W	501.00		
8950.00	86.275	316.501	8515.37	370.65 N	351.74 W	510.98		
8960.00	86.275	316.501	8516.02	377.88 N	358.61 W	520.96		
8970.00	86.275	316.501	8516.67	385.12 N	365.48 W	530.94		
8980.00	86.275	316.501	8517.32	392.36 N	372.34 W	540.91		
8990.00	86.275	316.501	8517.97	399.60 N	379.21 W	550.89		
9000.00	86.275	316.501	8518.62	406.84 N	386.08 W	560.87		
9010.00	86.275	316.501	8519.27	414.08 N	392.95 W	570.85		
9020.00	86.275	316.501	8519.92	421.32 N	399.82 W	580.83		
9030.00	86.275	316.501	8520.57	428.55 N	406.69 W	590.81		
9040.00	86.275	316.501	8521.22	435.79 N	413.56 W	600.79		
9050.00	86.275	316.501	8521.87	443.03 N	420.43 W	610.77		
9060.00	86.275	316.501	8522.52	450.27 N	427.30 W	620.75		
9070.00	86.275	316.501	8523.17	457.51 N	434.16 W	630.72		
9080.00	86.275	316.501	8523.82	464.75 N	441.03 W	640.70		
9090.00	86.275	316.501	8524.47	471.99 N	447.90 W	650.68		
9100.00	86.275	316.501	8525.12	479.22 N	454.77 W	660.66		
9110.00	86.275	316.501	8525.77	486.46 N	461.64 W	670.64		
9120.00	86.275	316.501	8526.42	493.70 N	468.51 W	680.62		
9130.00	86.275	316.501	8527.07	500.94 N	475.38 W	690.60		
9140.00	86.275	316.501	8527.72	508.18 N	482.25 W	700.58		
9150.00	86.275	316.501	8528.36	515.42 N	489.12 W	710.56		
9160.00	86.275	316.501	8529.01	522.66 N	495.98 W	720.53		
9170.00	86.275	316.501	8529.66	529.89 N	502.85 W	730.51		
9180.00	86.275	316.501	8530.31	537.13 N	509.72 W	740.49		
9190.00	86.275	316.501	8530.96	544.37 N	516.59 W	750.47		
9200.00	86.275	316.501	8531.61	551.61 N	523.46 W	760.45		
9210.00	86.275	316.501	8532.26	558.85 N	530.33 W	770.43		
9220.00	86.275	316.501	8532.91	566.09 N	537.20 W	780.41		

**SPERRY-SUN DRILLING SERVICE
WELL PROFILE DATA**

**MOBIL E&P SERVICES, INC.
NVAU #244**

**N/A
10-Jun-97**

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE (Ft)	DEPARTURE (Ft)	VERTICAL SECTION	DOG LEG	TOOL FACE
9230.00	86.275	316.501	8533.56	573.33 N	544.07 W	790.39		
9240.00	86.275	316.501	8534.21	580.56 N	550.94 W	800.37		
9250.00	86.275	316.501	8534.86	587.80 N	557.80 W	810.34		
9260.00	86.275	316.501	8535.51	595.04 N	564.67 W	820.32		
9270.00	86.275	316.501	8536.16	602.28 N	571.54 W	830.30		
9280.00	86.275	316.501	8536.81	609.52 N	578.41 W	840.28		
9290.00	86.275	316.501	8537.46	616.76 N	585.28 W	850.26		
9300.00	86.275	316.501	8538.11	624.00 N	592.15 W	860.24		
9310.00	86.275	316.501	8538.76	631.23 N	599.02 W	870.22		
9320.00	86.275	316.501	8539.41	638.47 N	605.89 W	880.20		
9330.00	86.275	316.501	8540.06	645.71 N	612.76 W	890.18		
9340.00	86.275	316.501	8540.71	652.95 N	619.62 W	900.15		
9350.00	86.275	316.501	8541.36	660.19 N	626.49 W	910.13		
9359.89	86.275	316.501	8542.00	667.35 N	633.29 W	920.01	0.000	0.000
9360.00	86.269	316.500	8542.01	667.43 N	633.36 W	920.11		
9360.01	86.269	316.500	8542.01	667.43 N	633.37 W	920.12	6.000	187.411
9370.00	86.269	316.500	8542.66	674.66 N	640.23 W	930.09		
9380.00	86.269	316.500	8543.31	681.90 N	647.10 W	940.07		
9390.00	86.269	316.500	8543.96	689.14 N	653.97 W	950.05		
9400.00	86.269	316.500	8544.61	696.38 N	660.84 W	960.03		
9410.00	86.269	316.500	8545.26	703.62 N	667.71 W	970.01		
9420.00	86.269	316.500	8545.91	710.86 N	674.58 W	979.98		
9430.00	86.269	316.500	8546.56	718.09 N	681.44 W	989.96		
9440.00	86.269	316.500	8547.21	725.33 N	688.31 W	999.94		
9450.00	86.269	316.500	8547.86	732.57 N	695.18 W	1009.92		
9460.00	86.269	316.500	8548.51	739.81 N	702.05 W	1019.90		
9470.00	86.269	316.500	8549.17	747.05 N	708.92 W	1029.88		
9480.00	86.269	316.500	8549.82	754.29 N	715.79 W	1039.86		
9490.00	86.269	316.500	8550.47	761.53 N	722.66 W	1049.84		
9500.00	86.269	316.500	8551.12	768.76 N	729.53 W	1059.81		
9510.00	86.269	316.500	8551.77	776.00 N	736.40 W	1069.79		
9520.00	86.269	316.500	8552.42	783.24 N	743.27 W	1079.77		
9530.00	86.269	316.500	8553.07	790.48 N	750.13 W	1089.75		
9540.00	86.269	316.500	8553.72	797.72 N	757.00 W	1099.73		
9550.00	86.269	316.500	8554.37	804.96 N	763.87 W	1109.71		
9560.00	86.269	316.500	8555.02	812.19 N	770.74 W	1119.69		
9570.00	86.269	316.500	8555.67	819.43 N	777.61 W	1129.67		
9580.00	86.269	316.500	8556.32	826.67 N	784.48 W	1139.65		
9590.00	86.269	316.500	8556.98	833.91 N	791.35 W	1149.62		
9600.00	86.269	316.500	8557.63	841.15 N	798.22 W	1159.60		
9610.00	86.269	316.500	8558.28	848.39 N	805.09 W	1169.58		
9620.00	86.269	316.500	8558.93	855.62 N	811.95 W	1179.56		
9630.00	86.269	316.500	8559.58	862.86 N	818.82 W	1189.54		
9640.00	86.269	316.500	8560.23	870.10 N	825.69 W	1199.52		
9650.00	86.269	316.500	8560.88	877.34 N	832.56 W	1209.50		

SPERRY-SUN DRILLING SERVICE WELL PROFILE DATA

MOBIL E&P SERVICES, INC.
NVAU #244

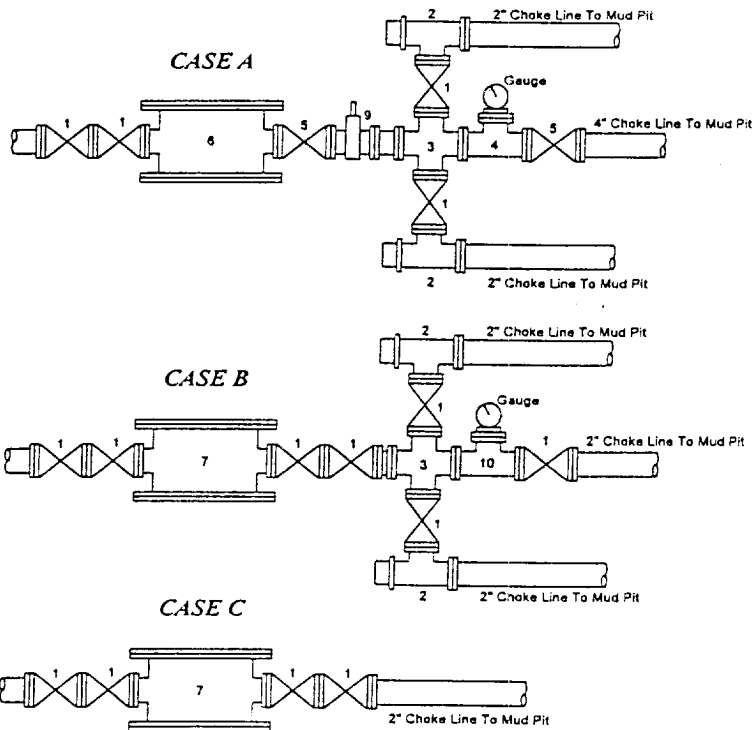
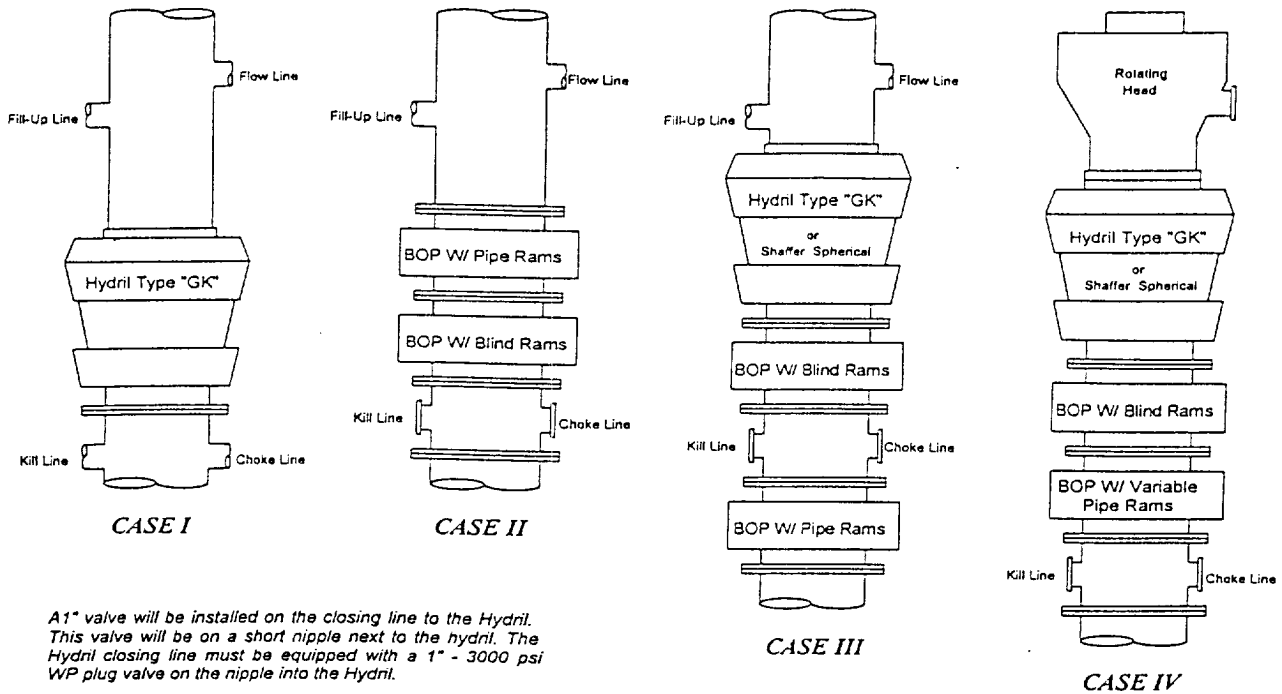
N/A
10-Jun-97

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE (Ft)	DEPARTURE (Ft)	VERTICAL SECTION	DOG LEG	TOOL FACE
9660.00	86.269	316.500	8561.53	884.58 N	839.43 W	1219.48		
9670.00	86.269	316.500	8562.18	891.82 N	846.30 W	1229.45		
9680.00	86.269	316.500	8562.83	899.05 N	853.17 W	1239.43		
9690.00	86.269	316.500	8563.48	906.29 N	860.04 W	1249.41		
9700.00	86.269	316.500	8564.13	913.53 N	866.91 W	1259.39		
9710.00	86.269	316.500	8564.78	920.77 N	873.78 W	1269.37		
9720.00	86.269	316.500	8565.44	928.01 N	880.64 W	1279.35		
9730.00	86.269	316.500	8566.09	935.25 N	887.51 W	1289.33		
9740.00	86.269	316.500	8566.74	942.48 N	894.38 W	1299.31		
9750.00	86.269	316.500	8567.39	949.72 N	901.25 W	1309.29		
9760.00	86.269	316.500	8568.04	956.96 N	908.12 W	1319.26		
9770.00	86.269	316.500	8568.69	964.20 N	914.99 W	1329.24		
9780.00	86.269	316.500	8569.34	971.44 N	921.86 W	1339.22		
9790.00	86.269	316.500	8569.99	978.68 N	928.73 W	1349.20		
9800.00	86.269	316.500	8570.64	985.92 N	935.60 W	1359.18		
9810.00	86.269	316.500	8571.29	993.15 N	942.46 W	1369.16		
9820.00	86.269	316.500	8571.94	1000.39 N	949.33 W	1379.14		
9820.87	86.269	316.500	8572.00	1001.02 N	949.93 W	1380.00	0.000	0.000

The Dogleg Severity is in Degrees per 100.00 Feet
Vertical Section was calculated along an Azimuth of 316.500° (True)

Based upon Minimum Curvature type calculations. At a Measured Depth of 9820.87 Feet,
the Bottom Hole Displacement is 1380.00 Feet, in the Direction of 316.500° (True)

SCHEDULE B MINIMUM BLOWOUT PREVENTER REQUIREMENTS



BOP SIZE	BOP CASE	WORKING PRESSURE	CHOKE CASE
11	II	3000	C

Bradenhead furnished by Mobil will be:
Mfr: National
Size: 11" - 3000 Type: SCWD

Legend

- 2" flanged all steel valve must be either Cameron "F", Halliburton Low Torque or Shaffer Flo-Seal.
- 2" flanged adjustable chokes, min. 1" full opening & equipped with hard trim.
- 4" x 2" flanged steel cross.
- 4" flanged steel tee.
- 4" flanged all steel valve (Type as in no. 1).
- Drilling Spool with 2" x 4" flanged outlet.
- Drilling Spool with 2" x 2" flanged outlet.
- 2" x 2" flanged steel cross.
- 4" pressure operated gate valve.
- 2" flanged steel tee.

Notes

Choke manifold may be located in any convenient position. Use all steel fittings throughout. Make 90° turns with bull plugged tees only. No field welding will be permitted on any of the components of the choke manifold and related equipment upstream of the chokes. The choke spool and all lines and fittings must be at least equivalent to the test pressure of the preventers required. Independent closing control unit with clearly marked controls to be located on derrick floor near driller's position.