

**NORTH VACUUM ABO #156**

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

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

AMENDED REPORT

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

<sup>1</sup> 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		<sup>2</sup> OGRID Number 15144
<sup>4</sup> Property Code 8055	<sup>3</sup> Property Name NORTH VACUUM ABO Unit	<sup>5</sup> Well Number 156

<sup>7</sup> Surface Location									
UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
D J	23	17-S	34-E		1893'	SOUTH	1800	EAST	LEA

<sup>8</sup> 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
O I	23	17-S	34-E		1393	SOUTH	1217	EAST	LEA

<sup>9</sup> Proposed Pool 1 N Vacuum Abo	<sup>10</sup> Proposed Pool 2
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<sup>11</sup> Work Type Code P	<sup>12</sup> Well Type Code I	<sup>13</sup> Cable/Rotary ROTARY	<sup>14</sup> Lease Type Code S	<sup>15</sup> Ground Level Elevation 4025'
<sup>16</sup> Multiple NO	<sup>17</sup> Proposed Depth 8492'	<sup>18</sup> Formations Abo	<sup>19</sup> Contractor	<sup>20</sup> Spud Date 06-30-97

<sup>21</sup> Proposed Casing and Cement Program					
Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12 1/4"	8 5/8"	23#	1750'	CIRCULATED	SURFACE
7 7/8"	5 1/2"	15.5, 14, & 17#	1043-8800' TD	CIRCULATED	APPX 2900'
EXISTING	WELLBORE				

<sup>22</sup> 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

Original signed by Chris Williams  
District I Supervisor  
Plugback

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.	<b>OIL CONSERVATION DIVISION</b>
Signature: <u>Chris Williams</u>	Approved by: ORIGINAL SIGNED BY CHRIS WILLIAMS
Printed name: CHRIS WILLIAMS	Title: DISTRICT I SUPERVISOR

Date: 8-18-1997	Phone: (915) 688-2585	Conditions of Approval: Attached <input type="checkbox"/>
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District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
Drawer DD, Artesia, NM 88211-0719  
District III  
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, New Mexico 87504-2088**

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number 30-025-23696		Pool Code 61760	Pool Name NORTH VACUUM Abo
Property Code 8055	Property Name NORTH VACUUM Abo Unit		Well Number 156
OGRID No. 15144	Operator Name MOBIL PRODUCING TX & NM INC. *MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM		Elevation 4025'

<sup>10</sup> Surface Location

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		1893'	SOUTH	1800'	EAST	LEA

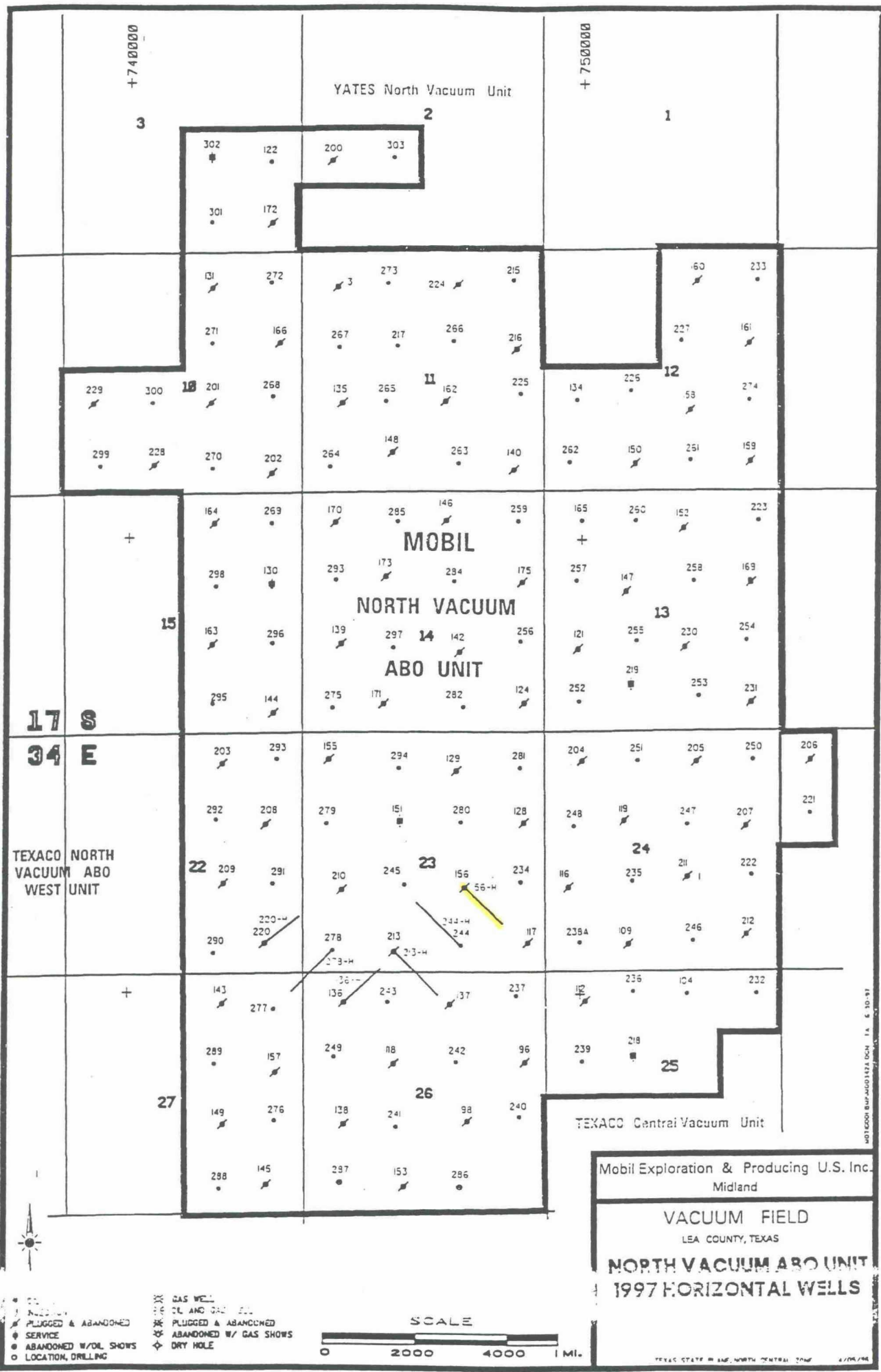
<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
OT	23	17-S	34-E		1383	SOUTH	1217	EAST	LEA

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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

					<p><sup>17</sup> OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><u>Shirley Houchins</u> Signature SHIRLEY HOUCHINS Printed Name ENV. &amp; REG. TECHNICIAN Title 8-18-1997 Date</p>				
					<p><sup>18</sup> SURVEYOR CERTIFICATION</p> <p>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.</p> <p>Date of Survey _____ Signature and Seal of Professional Surveyor: _____</p> <p>Certificate Number _____</p>				



- GAS WELL
- PLUGGED & ABANDONED
- SERVICE
- ABANDONED W/OIL SHOWS
- LOCATION, DRILLING
- PLUGGED & ABANDONED
- ABANDONED W/ GAS SHOWS
- DRY HOLE



Mobil Exploration & Producing U.S. Inc.  
Midland

VACUUM FIELD  
LEA COUNTY, TEXAS

**NORTH VACUUM ABO UNIT**  
**1997 HORIZONTAL WELLS**

TEXAS STATE MAP, NORTH CENTRAL ZONE 4/19/94

NVAU NO. 156W  
Lea County, New Mexico

I. GENERAL DRILLING SUMMARY

A. Objective

The objective of this project is to set a whipstock and cut a window in the 5-1/2" casing from 8369'-8378' and drill an open hole lateral in the Abo formation with a vertical section of 950 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 with annular and stripper head). POH w/ injection equipment. Set CIBP and whipstock @ 8384' and mill window from 8369'-8378'.
4. Drill curve and lateral to a vertical section of 950 ft. along an azimuth of 132 degrees. Drilling operations completed.

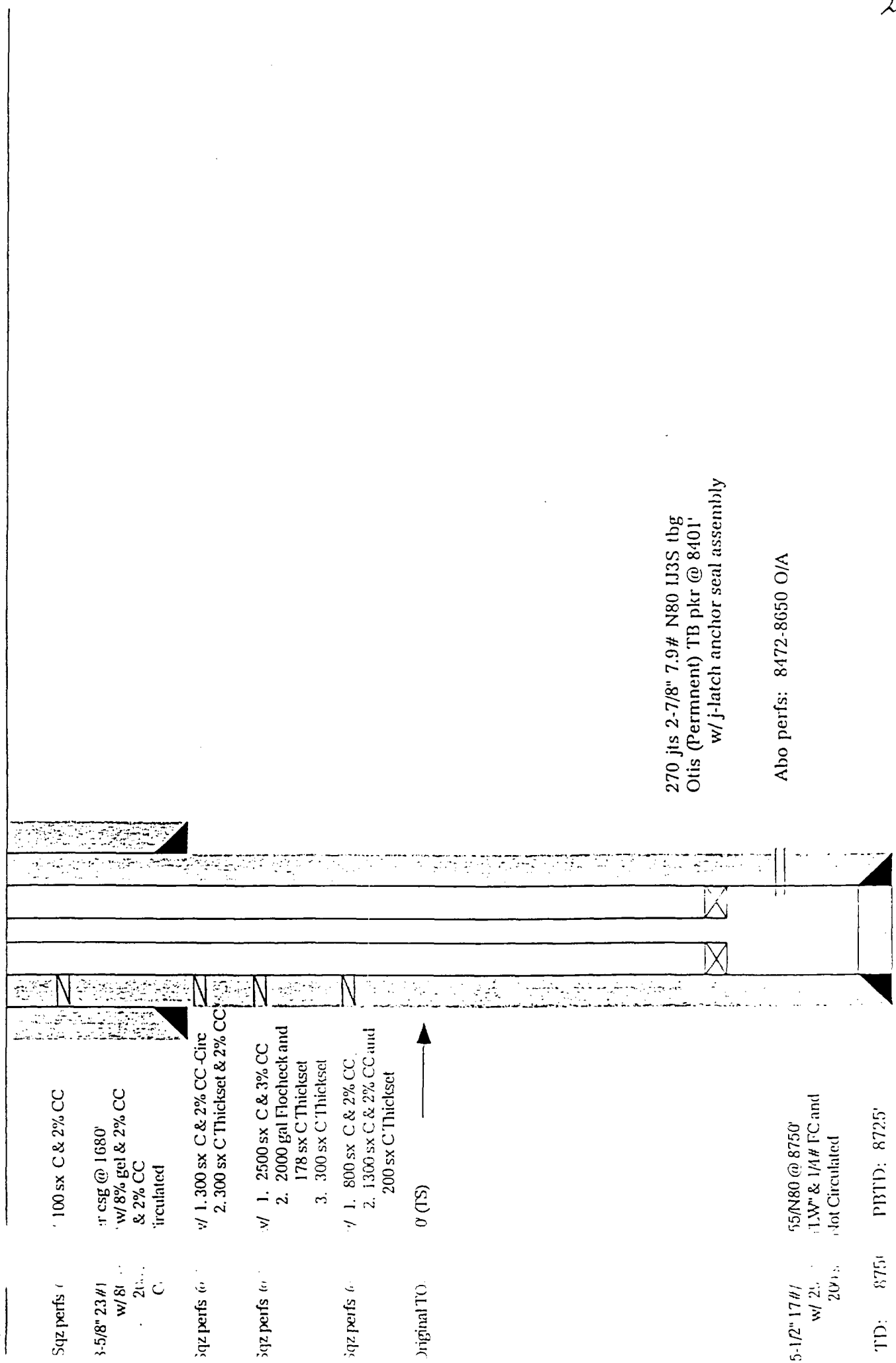
Note: Whipstock and CIBP MAY be removed following stimulation.

INVAU 1100W  
 Vacuum Bld  
 Lea County, New Mexico

MEE: 08/06/97  
 Spud: 04/03/71

1893' F3  
 1800' F1  
 S-23  
 F17S  
 R34E  
 KB: 4  
 GL: 4

Current Configuration



5qz perfs ( ) 100 sx C & 2% CC

3-5/8" 234/1  
 w/ 81' C  
 2000 gal Flocheck and  
 178 sx C Thickset  
 300 sx C Thickset

5qz perfs ( ) w/ 1. 300 sx C & 2% CC-Circ  
 2. 300 sx C Thickset & 2% CC

5qz perfs ( ) w/ 1. 2500 sx C & 3% CC  
 2. 2000 gal Flocheck and  
 178 sx C Thickset  
 300 sx C Thickset

5qz perfs ( ) w/ 1. 800 sx C & 2% CC  
 2. 1300 sx C & 2% CC and  
 200 sx C Thickset

Original TO 0' (TS) ↑

5-1/2" 17#1  
 w/ 25' C  
 2000 gal Flocheck and  
 178 sx C Thickset  
 300 sx C Thickset

TD: 875' PBTD: 8725'

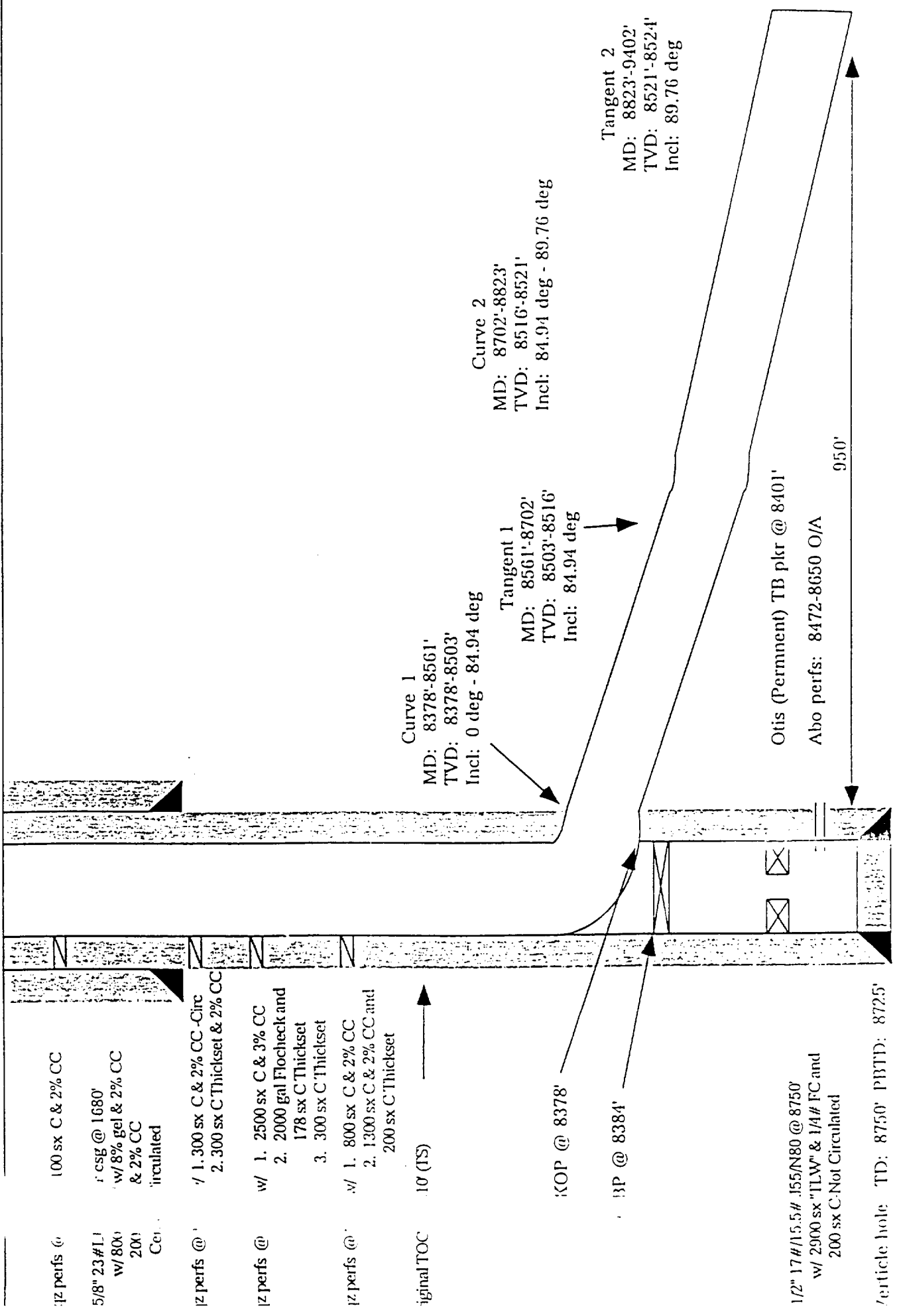
270 jts 2-7/8" 7.9# N80 U3S tbg  
 Otis (Perment) TB pkr @ 8401'  
 w/ j-latch anchor seal assembly

Abo perfs: 8472-8650 O/A

INVAU 130W  
 Vacuum  
 Lea County, New Mexico  
 Proposed Configuration

MEE: 08/12/97  
 Spud: 04/03/71

893' PSI  
 800' F  
 -23  
 17S  
 34E  
 TB: 40  
 BL: 40



100 sx C & 2% CC

1. 100' csg @ 1680'  
 w/ 8% gel & 2% CC  
 & 2% CC  
 Circulated

1. 300 sx C & 2% CC - Circ  
 2. 300 sx C Thickset & 2% CC

1. 2500 sx C & 3% CC  
 2. 2000 gal Flocheck and  
 178 sx C Thickset  
 3. 300 sx C Thickset

1. 800 sx C & 2% CC  
 2. 1300 sx C & 2% CC and  
 200 sx C Thickset

10' (TS)

KOP @ 8378'

BP @ 8384'

1 1/2" 17# 15.5# 155/N80 @ 8750'  
 w/ 2000 sx "TLW" & 1/4# FC and  
 200 sx C - Not Circulated

Article hole TD: 8750' PBTD: 8725'

Curve 1

MD: 8378'-8561'  
 TVD: 8378'-8503'  
 Incl: 0 deg - 84.94 deg

Tangent 1

MD: 8561'-8702'  
 TVD: 8503'-8516'  
 Incl: 84.94 deg

Curve 2

MD: 8702'-8823'  
 TVD: 8516'-8521'  
 Incl: 84.94 deg - 89.76 deg

Tangent 2

MD: 8823'-9402'  
 TVD: 8521'-8524'  
 Incl: 89.76 deg

Otis (Perment) TB plkr @ 8401'

Abo perfs: 8472-8650 O/A

950'

**WELL PLANNING  
REPORT**

**MOBIL E&P SERVICES, INC.**

**NVAU #156**

**N/A  
12-Aug-97**



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

**MOBIL E&P SERVICES, INC.  
NVAU #156**

N/A  
12-Aug-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		
<b>8378.00</b>	<b>0.000</b>	<b>0.000</b>	<b>8378.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.000</b>	<b>0.000</b>
8380.00	0.750	132.000	8380.00	0.01 S	0.01 E	0.01		
<b>8386.00</b>	<b>3.000</b>	<b>132.000</b>	<b>8386.00</b>	<b>0.14 S</b>	<b>0.16 E</b>	<b>0.21</b>	<b>37.500</b>	<b>132.000</b>
8390.00	4.600	132.000	8389.99	0.32 S	0.35 E	0.47		
8400.00	8.600	132.000	8399.92	1.09 S	1.21 E	1.62		
8410.00	12.600	132.000	8409.75	2.32 S	2.57 E	3.46		
<b>8416.00</b>	<b>15.000</b>	<b>132.000</b>	<b>8415.57</b>	<b>3.27 S</b>	<b>3.64 E</b>	<b>4.89</b>	<b>40.000</b>	<b>0.000</b>
8420.00	16.920	132.000	8419.42	4.01 S	4.45 E	5.99		
8430.00	21.720	132.000	8428.85	6.22 S	6.91 E	9.30		
8440.00	26.520	132.000	8437.98	8.96 S	9.95 E	13.39		
8450.00	31.320	132.000	8446.73	12.19 S	13.54 E	18.22		
8460.00	36.120	132.000	8455.04	15.91 S	17.67 E	23.77		
8470.00	40.920	132.000	8462.86	20.07 S	22.29 E	30.00		
8480.00	45.720	132.000	8470.14	24.66 S	27.39 E	36.86		
8490.00	50.520	132.000	8476.81	29.64 S	32.92 E	44.30		
8500.00	55.320	132.000	8482.84	34.98 S	38.85 E	52.27		
8510.00	60.120	132.000	8488.18	40.63 S	45.13 E	60.73		
8520.00	64.920	132.000	8492.79	46.57 S	51.72 E	69.60		
8530.00	69.720	132.000	8496.65	52.74 S	58.57 E	78.82		
8540.00	74.520	132.000	8499.71	59.11 S	65.64 E	88.33		
8550.00	79.320	132.000	8501.98	65.62 S	72.88 E	98.07		
8560.00	84.120	132.000	8503.42	72.24 S	80.23 E	107.96		
<b>8561.71</b>	<b>84.942</b>	<b>132.000</b>	<b>8503.58</b>	<b>73.38 S</b>	<b>81.50 E</b>	<b>109.67</b>	<b>48.000</b>	<b>0.000</b>
8570.00	84.942	132.000	8504.31	78.91 S	87.63 E	117.92		
8580.00	84.942	132.000	8505.19	85.57 S	95.04 E	127.89		
8590.00	84.942	132.000	8506.07	92.24 S	102.44 E	137.85		
8600.00	84.942	132.000	8506.96	98.90 S	109.84 E	147.81		
8610.00	84.942	132.000	8507.84	105.57 S	117.24 E	157.77		
8620.00	84.942	132.000	8508.72	112.23 S	124.65 E	167.73		
8630.00	84.942	132.000	8509.60	118.90 S	132.05 E	177.69		
8640.00	84.942	132.000	8510.48	125.56 S	139.45 E	187.65		
8650.00	84.942	132.000	8511.36	132.23 S	146.85 E	197.61		
8660.00	84.942	132.000	8512.25	138.89 S	154.25 E	207.57		
8670.00	84.942	132.000	8513.13	145.56 S	161.66 E	217.53		
8680.00	84.942	132.000	8514.01	152.22 S	169.06 E	227.50		
8690.00	84.942	132.000	8514.89	158.89 S	176.47 E	237.46		
8700.00	84.942	132.000	8515.77	165.56 S	183.87 E	247.42		
<b>8702.59</b>	<b>84.942</b>	<b>132.000</b>	<b>8516.00</b>	<b>167.28 S</b>	<b>185.78 E</b>	<b>250.00</b>	<b>0.000</b>	<b>0.000</b>
8710.00	85.238	132.000	8516.63	172.22 S	191.27 E	257.38		
8720.00	85.638	132.000	8517.43	178.89 S	198.68 E	267.35		
8730.00	86.038	132.000	8518.16	185.57 S	206.09 E	277.32		
8740.00	86.438	132.000	8518.81	192.24 S	213.51 E	287.30		
8750.00	86.838	132.000	8519.40	198.92 S	220.93 E	297.28		
8760.00	87.238	132.000	8519.91	205.60 S	228.35 E	307.27		

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

MOBIL E&P SERVICES, INC.  
NVAU #156

N/A  
12-Aug-97

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE (FL)	DEPARTURE (FL)	VERTICAL SECTION	DOG LEG	TOOL FACE
8770.00	87.638	132.000	8520.36	212.29 S	235.77 E	317.26		
8780.00	88.038	132.000	8520.74	218.98 S	243.20 E	327.25		
8790.00	88.438	132.000	8521.05	225.66 S	250.62 E	337.25		
8800.00	88.838	132.000	8521.28	232.35 S	258.05 E	347.25		
8810.00	89.238	132.000	8521.45	239.04 S	265.48 E	357.24		
8820.00	89.638	132.000	8521.55	245.73 S	272.92 E	367.24		
8823.03	89.759	132.000	8521.57	247.76 S	275.16 E	370.27	4.000	0.000
8830.00	89.759	132.000	8521.59	252.43 S	280.35 E	377.24		
8840.00	89.759	132.000	8521.64	259.12 S	287.78 E	387.24		
8850.00	89.759	132.000	8521.68	265.81 S	295.21 E	397.24		
8860.00	89.759	132.000	8521.72	272.50 S	302.64 E	407.24		
8870.00	89.759	132.000	8521.76	279.19 S	310.07 E	417.24		
8880.00	89.759	132.000	8521.80	285.88 S	317.50 E	427.24		
8890.00	89.759	132.000	8521.85	292.57 S	324.93 E	437.24		
8900.00	89.759	132.000	8521.89	299.26 S	332.37 E	447.24		
8910.00	89.759	132.000	8521.93	305.96 S	339.80 E	457.24		
8920.00	89.759	132.000	8521.97	312.65 S	347.23 E	467.24		
8930.00	89.759	132.000	8522.01	319.34 S	354.66 E	477.24		
8940.00	89.759	132.000	8522.06	326.03 S	362.09 E	487.24		
8950.00	89.759	132.000	8522.10	332.72 S	369.52 E	497.24		
8960.00	89.759	132.000	8522.14	339.41 S	376.95 E	507.24		
8970.00	89.759	132.000	8522.18	346.10 S	384.39 E	517.24		
8980.00	89.759	132.000	8522.22	352.79 S	391.82 E	527.24		
8990.00	89.759	132.000	8522.27	359.49 S	399.25 E	537.24		
9000.00	89.759	132.000	8522.31	366.18 S	406.68 E	547.24		
9010.00	89.759	132.000	8522.35	372.87 S	414.11 E	557.24		
9020.00	89.759	132.000	8522.39	379.56 S	421.54 E	567.24		
9030.00	89.759	132.000	8522.43	386.25 S	428.97 E	577.24		
9040.00	89.759	132.000	8522.48	392.94 S	436.41 E	587.24		
9050.00	89.759	132.000	8522.52	399.63 S	443.84 E	597.24		
9060.00	89.759	132.000	8522.56	406.33 S	451.27 E	607.24		
9070.00	89.759	132.000	8522.60	413.02 S	458.70 E	617.24		
9080.00	89.759	132.000	8522.64	419.71 S	466.13 E	627.24		
9090.00	89.759	132.000	8522.69	426.40 S	473.56 E	637.24		
9100.00	89.759	132.000	8522.73	433.09 S	480.99 E	647.24		
9110.00	89.759	132.000	8522.77	439.78 S	488.42 E	657.24		
9120.00	89.759	132.000	8522.81	446.47 S	495.86 E	667.24		
9130.00	89.759	132.000	8522.85	453.16 S	503.29 E	677.24		
9140.00	89.759	132.000	8522.90	459.86 S	510.72 E	687.24		
9150.00	89.759	132.000	8522.94	466.55 S	518.15 E	697.24		
9160.00	89.759	132.000	8522.98	473.24 S	525.58 E	707.24		
9170.00	89.759	132.000	8523.02	479.93 S	533.01 E	717.24		
9180.00	89.759	132.000	8523.06	486.62 S	540.44 E	727.24		
9190.00	89.759	132.000	8523.11	493.31 S	547.88 E	737.24		
9200.00	89.759	132.000	8523.15	500.00 S	555.31 E	747.24		

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

MOBIL E&P SERVICES, INC.  
NVAU #156

N/A  
12-Aug-97

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE (Ft)	DEPARTURE (Ft)	VERTICAL SECTION	DOG LEG	TOOL FACE
9210.00	89.759	132.000	8523.19	506.69 S	562.74 E	757.24		
9220.00	89.759	132.000	8523.23	513.39 S	570.17 E	767.24		
9230.00	89.759	132.000	8523.27	520.08 S	577.60 E	777.24		
9240.00	89.759	132.000	8523.32	526.77 S	585.03 E	787.24		
9250.00	89.759	132.000	8523.36	533.46 S	592.46 E	797.24		
9260.00	89.759	132.000	8523.40	540.15 S	599.90 E	807.24		
9270.00	89.759	132.000	8523.44	546.84 S	607.33 E	817.24		
9280.00	89.759	132.000	8523.48	553.53 S	614.76 E	827.24		
9290.00	89.759	132.000	8523.53	560.22 S	622.19 E	837.24		
9300.00	89.759	132.000	8523.57	566.92 S	629.62 E	847.24		
9310.00	89.759	132.000	8523.61	573.61 S	637.05 E	857.24		
9320.00	89.759	132.000	8523.65	580.30 S	644.48 E	867.24		
9330.00	89.759	132.000	8523.69	586.99 S	651.91 E	877.24		
9340.00	89.759	132.000	8523.74	593.68 S	659.35 E	887.24		
9350.00	89.759	132.000	8523.78	600.37 S	666.78 E	897.24		
9360.00	89.759	132.000	8523.82	607.06 S	674.21 E	907.24		
9370.00	89.759	132.000	8523.86	613.76 S	681.64 E	917.24		
9380.00	89.759	132.000	8523.90	620.45 S	689.07 E	927.24		
9390.00	89.759	132.000	8523.95	627.14 S	696.50 E	937.24		
9400.00	89.759	132.000	8523.99	633.83 S	703.93 E	947.24		
9402.76	89.759	132.000	8524.00	635.68 S	705.98 E	950.00	0.000	0.000

The Dogleg Severity is in Degrees per 100.00 Feet  
Vertical Section was calculated along an Azimuth of 132.000° (True)

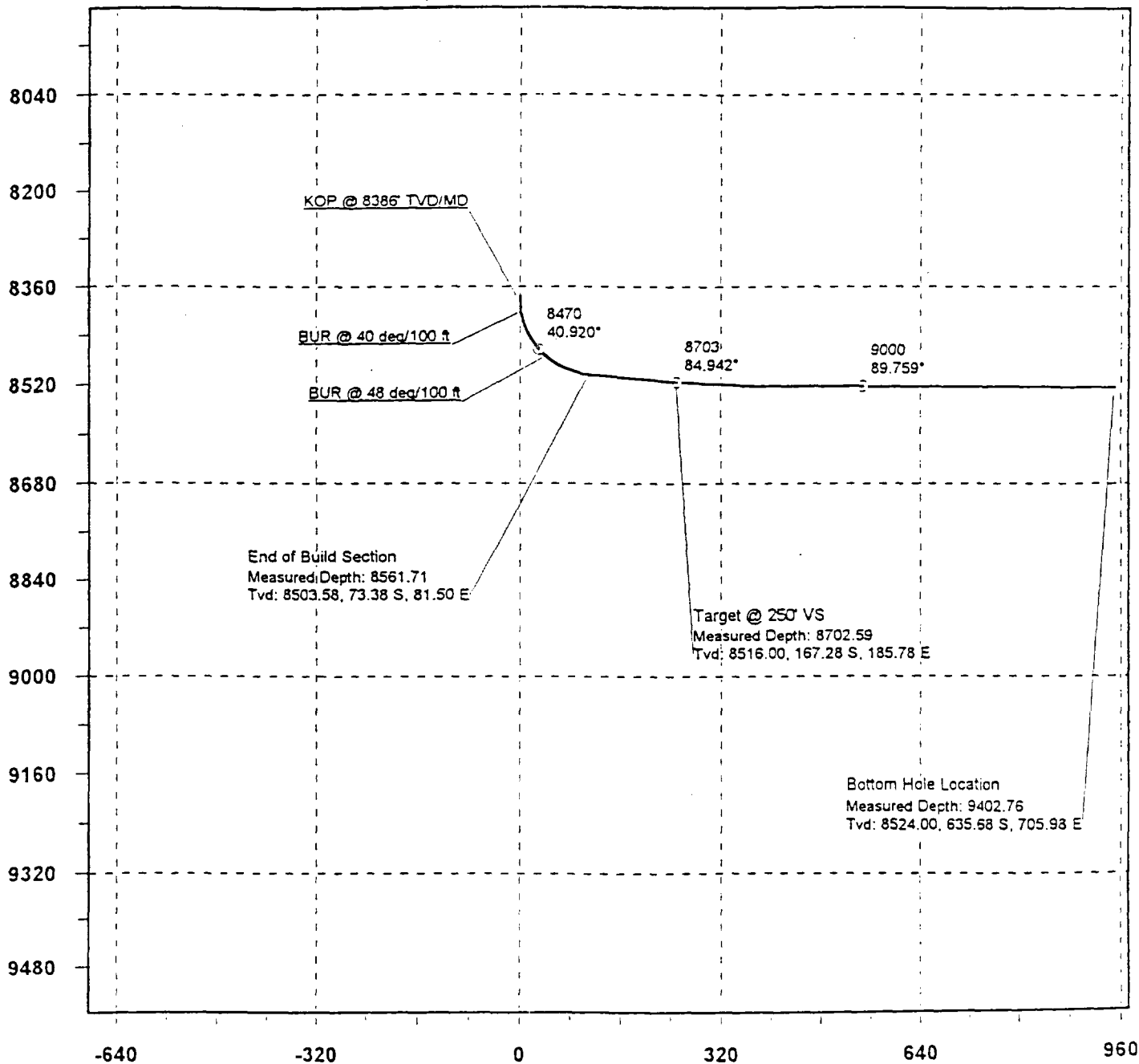
Based upon Minimum Curvature type calculations. At a Measured Depth of 9402.76 Feet,  
the Bottom Hole Displacement is 950.00 Feet, in the Direction of 132.000° (True)

# SPERRY-SUN DRILLING SERVICES VERTICAL SECTION

MOBIL E&P SERVICES, INC.  
NVAU #156

N/A  
12-Aug-97

VERTICAL  
DEPTH



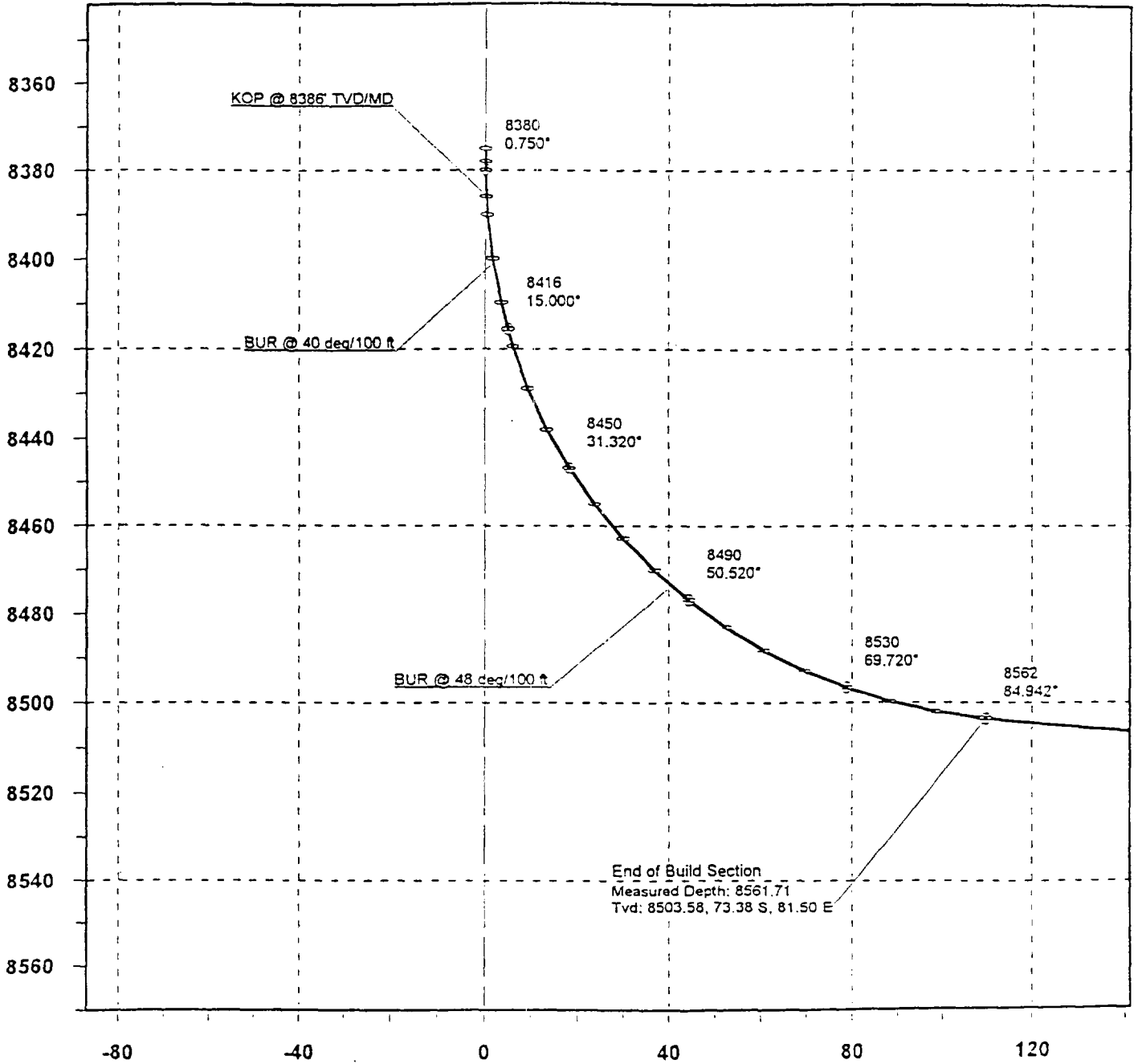
VERTICAL SECTION - Direction: 132.000° (True)  
 Depths shown on plot are Measured Depths.  
 All measurements are in Feet.

# SPERRY-SUN DRILLING SERVICES VERTICAL SECTION

MOBIL E&P SERVICES, INC.  
NVAU #156

N/A  
12-Aug-97

VERTICAL  
DEPTH



**VERTICAL SECTION - Direction: 132.000° (True)**

Depths shown on plot are Measured Depths.

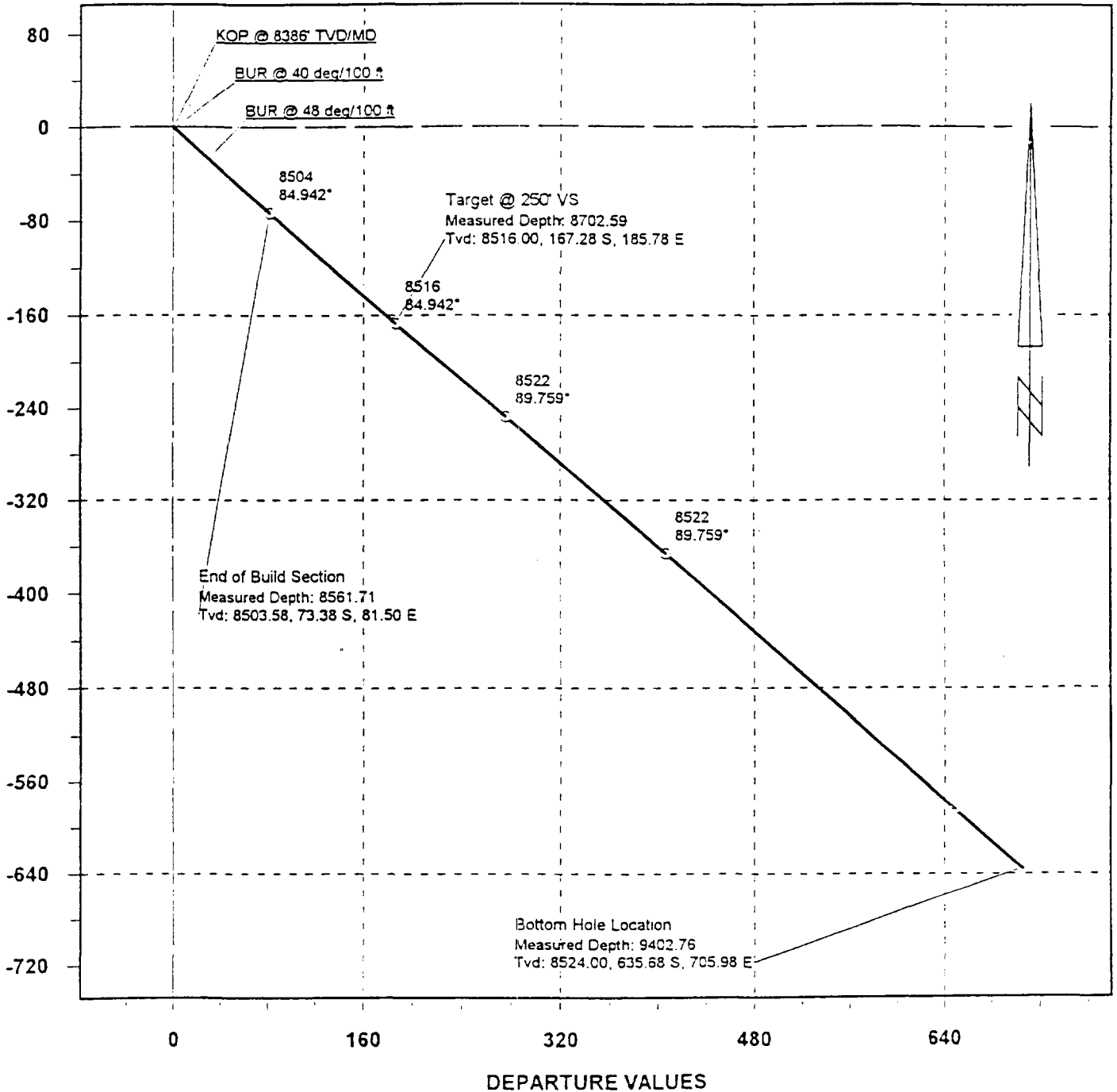
All measurements are in Feet.

# SPERRY-SUN DRILLING SERVICES HORIZONTAL SECTION

MOBIL E&P SERVICES, INC.  
NVAU #156

N/A  
12-Aug-97

LATITUDE  
VALUES



Submit to Appropriate District Office  
 State Lease - 6 copies  
 Fee Lease - 5 copies

State of New Mexico  
 Energy, Minerals and Natural Resources Department

Form C-105  
 Revised 1-89

DISTRICT I  
 J. Box 1980, Hobbs, NM 88240

**OIL CONSERVATION DIVISION**  
 2040 Pacheco St.  
 Santa Fe, NM 87505

DISTRICT II  
 P.O. Drawer DD, Artesia, NM 88210

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

WELL API NO. <b>30-025-23696</b>
5. Indicate Type Of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. <b>B-1520-1</b>
7. Lease Name or Unit Agreement Name <b>NORTH VACUUM ABO UNIT</b>
8. Well No. <b>156W</b>
9. Pool name or Wildcat <b>NORTH VACUUM ABO</b>

WELL COMPLETION OR RECOMPLETION REPORT AND LOG					
1a. Type of Well: OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> INJECTOR			7. Lease Name or Unit Agreement Name <b>NORTH VACUUM ABO UNIT</b>		
b. Type of Completion: NEW WELL <input type="checkbox"/> WORK OVER <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF RESVR <input type="checkbox"/> OTHER <u>SIDETRACK</u>					
2. Name of Operator <b>MOBIL PRODUCING TX &amp; NM INC.*</b> <b>*MOBIL EXPLORATION &amp; PRODUCING US INC. AS AGENT FOR MPTM</b>			8. Well No. <b>156W</b>		
3. Address of Operator <b>P.O. Box 633 Midland, TX 79702</b>			9. Pool name or Wildcat <b>NORTH VACUUM ABO</b>		
4. Well Location Unit Letter <u>J</u> : <u>1893'</u> Feet From The <u>SOUTH</u> Line and <u>1800'</u> Feet From The <u>EAST</u> Line Section <u>23</u> Township <u>17S</u> Range <u>34E</u> NMPM LEA County					
10. Date Spudded <b>11-14-97</b>	11. Date T.D. Reached <b>12-01-97</b>	12. Date Compl.(Ready to Prod.) <b>12-22-97</b>	13. Elevations(DF & RKB, RT, GR, etc.) <b>4025' GR</b>	14. Elev. Casinghead	
15. Total Depth <b>9413' TMD OHZ</b>	16. Plug Back T.D. <b>9413' TMD OHZ</b>	17. If Multiple Compl. How Many Zones?	18. Intervals Drilled By <b>X</b>	Rotary Tools <b>X</b>	Cable Tools
19. Producing Interval(s), of this completion - Top, Bottom, Name <b>8611-9413' TMD OHZ ABO</b>				20. Was Directional Survey Made <b>YES</b>	
21. Type Electric and Other Logs Run <b>IA</b>			22. Was Well Cored <b>NO</b>		

23. CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
<b>8 5/8"</b>	<b>23#</b>	<b>1750'</b>	<b>12 1/4"</b>	<b>CIRCULATED/SURFACE</b>	<b>NA</b>
<b>5 1/2"</b>	<b>15.5, 14 &amp; 17#</b>	<b>1043-8800'</b>	<b>7 7/8"</b>	<b>CIRCULATED/SURFACE</b>	

24. LINER RECORD				25. TUBING RECORD			
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					<b>2 7/8"</b>		<b>8280'</b>

26. Perforation record (interval, size, and number) <b>8611-9413' TMD OHZ</b>	27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.	
	DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
	<b>8611-9413' TMD</b>	<b>LAT. #1A1, ACIDIZE W/10,000 GALS 20% HCL</b>

28. PRODUCTION							
Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)				Well Status (Prod. or Shut-in)	
Date of Test	Hours Tested	Choke Size	Prod'n For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)	Test Witnessed By
--	-------------------

30. List Attachments  
**DIRECTIONAL SURVEY**

31. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief

Signature Shirley Houchins Printed Name SHIRLEY HOUCHINS Title ENV & REG TECH Date 1-29-98

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102

Revised October 18, 1994

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
1st Street, Artesia, NM 88210-2834  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-025-23696		<sup>2</sup> Pool Code 61760		<sup>3</sup> Pool Name NORTH VACUUM ABO	
<sup>4</sup> Property Code 8055		<sup>5</sup> Property Name NORTH VACUUM ABO UNIT			<sup>6</sup> Well Number 156W
<sup>7</sup> OGRID No. 15144		<sup>8</sup> Operator Name MOBIL PRODUCING TX & NM INC. *MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM			<sup>9</sup> Elevation 4025' GR

<sup>10</sup> Surface Location									
UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
J	23	17S	34E		1893	SOUTH	1800	EAST	LEA

<sup>11</sup> 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
	23	17S	34E		656	SOUTH	696	EAST	LEA

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
-------------------------------	-------------------------------	----------------------------------	-------------------------

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

	<p><sup>17</sup> OPERATOR CERTIFICATION</p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i></p> <p><u>Shirley Houchins</u> Signature SHIRLEY HOUCHINS Printed Name ENV &amp; REG TECHNICIAN Title 1-29-98 Date</p>
	<p><sup>18</sup> SURVEYOR CERTIFICATION</p> <p><i>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.</i></p> <p>_____ Date of Survey _____ Signature and Seal of Professional Surveyer:</p>
	<p>_____ Certificate Number</p>



**sperry-sun**  
**DRILLING SERVICES**

A DRESSER INDUSTRIES, INC. COMPANY

*Mobil Exploration  
Vacuum Field (PA/WC)  
Lea County  
Sec. 26-T17S-R34E  
NV ABO # 156 - MWD Survey*

**SURVEY REPORT**

*10 December, 1997*

*Survey Ref: svy2367*

# Sperry-Sun Drilling Services

Survey Report for NV ABO # 156 - MWD Survey



Mobil Exploration  
Vacuum Field (PAWC)

Lea County  
Sec. 26-T17S-R34E

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
8347.00	0.920	145.370	8346.36	13.88 S	23.94 W	-8.28	
8353.00	2.800	135.740	8352.36	14.02 S	23.81 W	-8.08	31.653
8365.00	4.900	135.160	8364.33	14.60 S	23.25 W	-7.28	17.503
8375.00	8.200	136.390	8374.27	15.42 S	22.45 W	-6.14	33.028
8385.00	11.600	136.920	8384.12	16.67 S	21.27 W	-4.43	34.012
8395.00	15.200	137.230	8393.84	18.36 S	19.70 W	-2.12	36.007
8405.00	18.700	137.500	8403.41	20.51 S	17.72 W	0.79	35.009
8415.00	23.600	138.500	8412.73	23.19 S	15.31 W	4.38	49.131
8425.00	27.300	135.500	8421.76	26.33 S	12.38 W	8.66	39.171
8435.00	30.500	133.700	8430.51	29.72 S	8.93 W	13.49	33.158
8445.00	33.400	136.900	8439.00	33.48 S	5.22 W	18.77	33.573
8455.00	36.500	139.500	8447.19	37.75 S	1.40 W	24.47	34.386
8465.00	39.700	138.400	8455.06	42.41 S	2.65 E	30.60	32.711
8475.00	43.200	136.300	8462.56	47.27 S	7.14 E	37.20	37.656
8485.00	47.000	133.700	8469.61	52.27 S	12.15 E	44.27	42.222
8495.00	50.900	132.100	8476.18	57.40 S	17.67 E	51.81	40.822
8505.00	54.200	128.500	8482.26	62.53 S	23.73 E	59.74	43.647
8515.00	55.600	126.300	8488.01	67.50 S	30.23 E	67.89	22.802
8525.00	56.100	130.500	8493.63	72.64 S	36.71 E	76.14	35.113
8535.00	59.100	132.200	8498.98	78.22 S	43.04 E	84.58	33.255
8545.00	63.100	133.500	8503.82	84.17 S	49.46 E	93.33	41.586
8555.00	67.100	134.300	8508.03	90.46 S	55.99 E	102.40	40.652
8565.00	71.300	134.300	8511.58	96.99 S	62.68 E	111.74	42.000
8575.00	75.400	134.100	8514.44	103.66 S	69.55 E	121.31	41.045
8585.00	79.400	133.500	8516.62	110.42 S	76.59 E	131.07	40.426
8609.00	86.600	131.300	8519.54	126.47 S	94.17 E	154.87	31.347
8640.00	89.400	127.000	8520.63	146.02 S	118.19 E	185.79	16.544
8671.00	91.500	126.900	8520.38	164.65 S	142.96 E	216.64	6.782
8702.00	91.000	127.000	8519.71	183.28 S	167.73 E	247.49	1.645
8733.00	90.700	127.600	8519.25	202.07 S	192.39 E	278.36	2.164
8765.00	92.100	131.400	8518.47	222.41 S	217.07 E	310.30	12.652
8796.00	91.000	135.100	8517.63	243.64 S	239.63 E	341.28	12.447
8827.00	89.900	137.900	8517.38	266.12 S	260.97 E	372.20	9.704
8857.00	90.300	139.400	8517.33	288.64 S	280.79 E	402.02	5.175
8888.00	88.800	139.500	8517.57	312.20 S	300.94 E	432.79	4.849
8919.00	87.500	138.500	8518.58	335.58 S	321.27 E	463.58	5.290
8949.00	86.700	137.100	8520.09	357.77 S	341.39 E	493.41	5.370
8979.00	86.600	135.700	8521.85	379.46 S	362.05 E	523.29	4.671
9010.00	87.900	134.600	8523.33	401.41 S	383.88 E	554.22	5.491
9041.00	89.100	132.800	8524.14	422.82 S	406.29 E	585.20	6.977

Continued...

# Sperry-Sun Drilling Services

Survey Report for NV ABO # 156 - MWD Survey



Mobil Exploration  
Vacuum Field (PA/WC)

Lea County  
Sec. 26-T17S-R34E

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
9072.00	92.000	132.800	8523.85	443.88 S	429.03 E	616.19	9.355
9103.00	92.100	132.300	8522.74	464.83 S	451.85 E	647.17	1.644
9135.00	89.400	130.600	8522.32	486.01 S	475.83 E	679.16	9.970
9165.00	91.100	130.200	8522.19	505.45 S	498.68 E	709.14	5.821
9197.00	90.300	129.200	8521.80	525.89 S	523.29 E	741.10	4.002
9228.00	91.300	128.300	8521.36	545.29 S	547.47 E	772.03	4.340
9259.00	90.800	127.200	8520.80	564.27 S	571.97 E	802.92	3.897
9290.00	91.600	126.900	8520.15	582.94 S	596.71 E	833.77	2.756
9321.00	90.900	126.700	8519.47	601.51 S	621.53 E	864.61	2.348
9352.00	89.400	126.300	8519.39	619.94 S	646.45 E	895.44	5.008
9383.00	87.500	126.000	8520.23	638.22 S	671.47 E	926.23	6.205
9413.00	87.500	126.000	8521.54	655.84 S	695.71 E	956.01	0.000

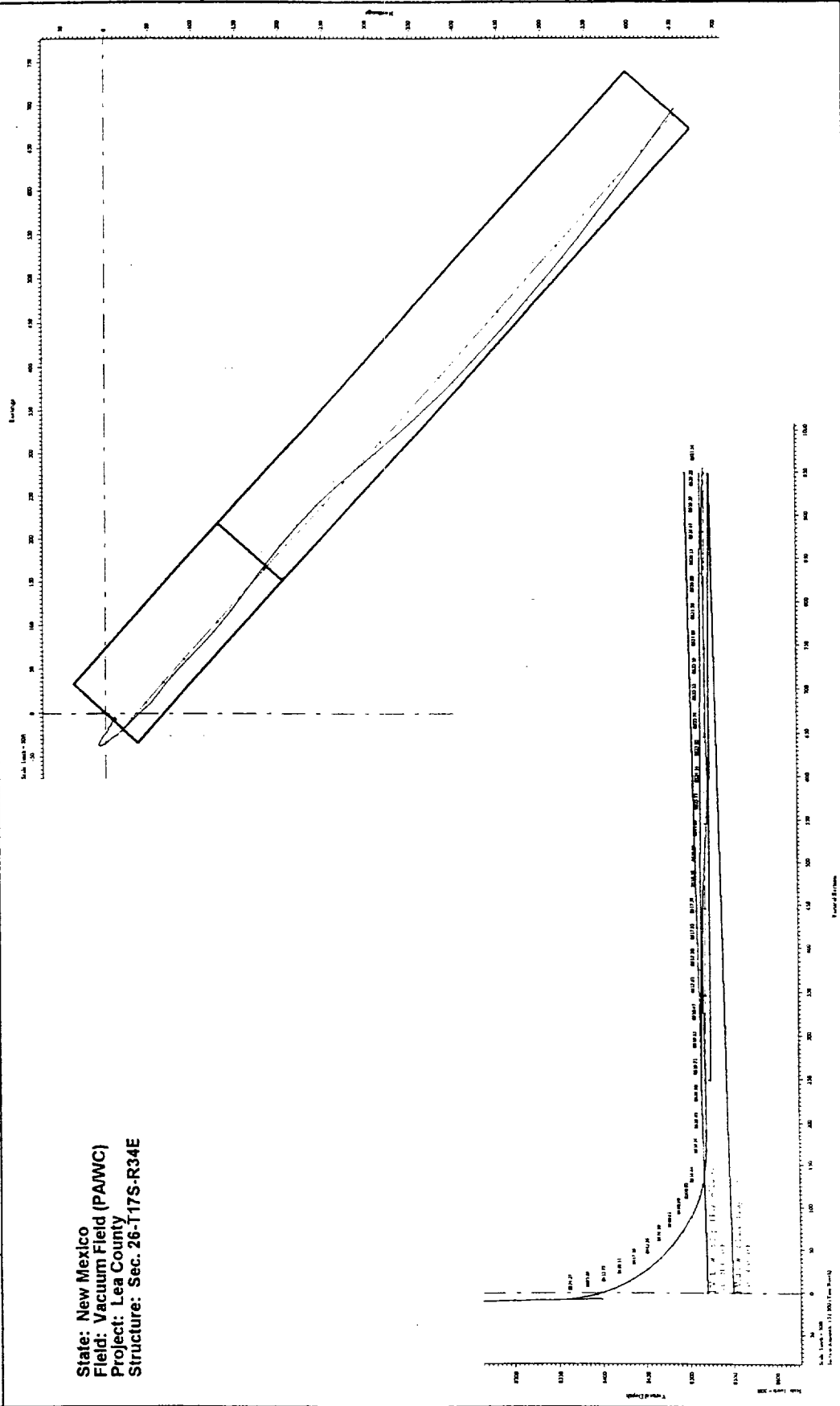
All data is in feet unless otherwise stated. Directions and coordinates are relative to True North.  
Vertical depths are relative to RKB. Northings and Eastings are relative to Wellhead.

The Dogleg Severity is in Degrees per 100ft.

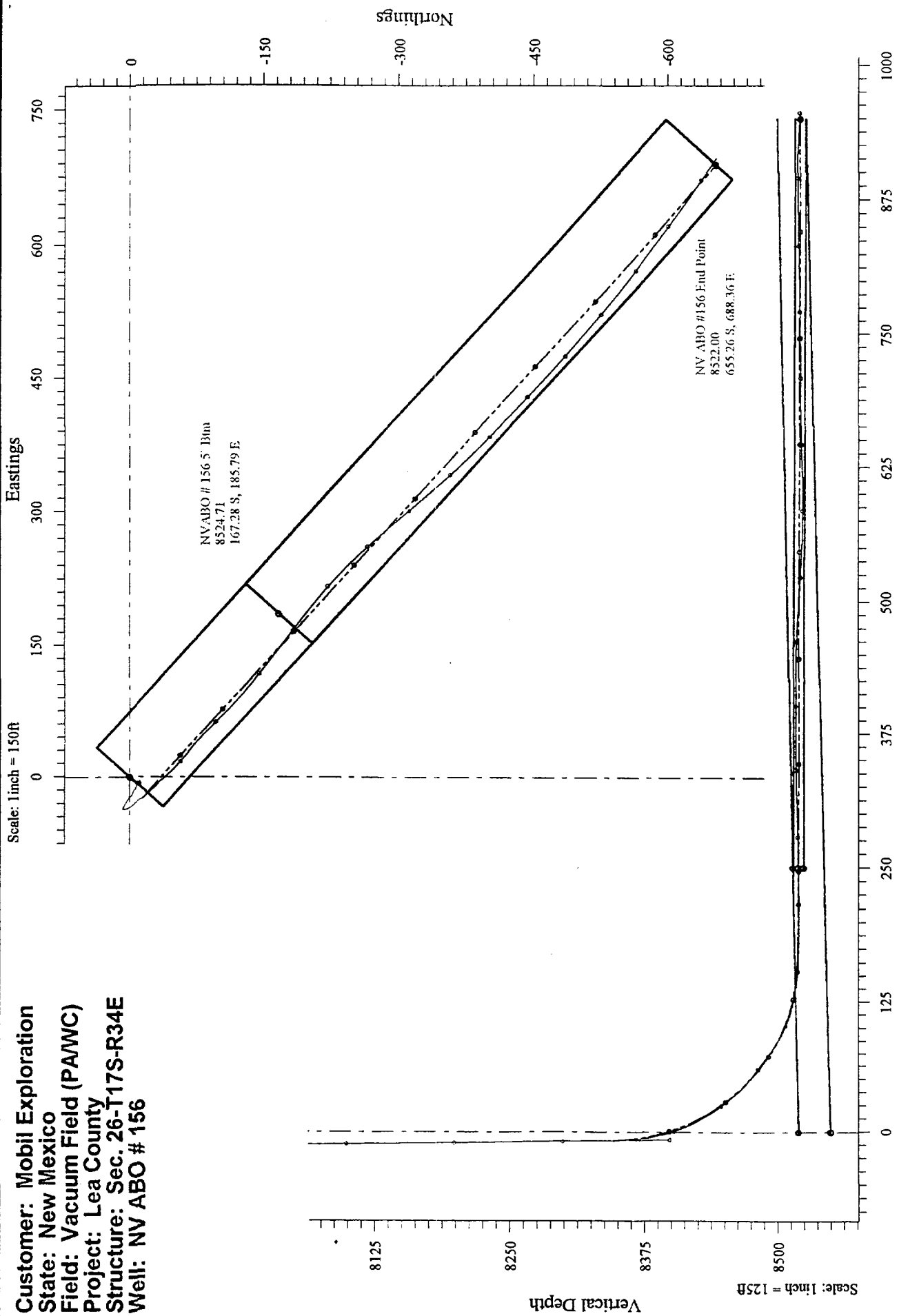
Vertical Section is from Wellhead and calculated along an Azimuth of 132.500° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 9413.00ft.,  
The Bottom Hole Displacement is 956.11ft., in the Direction of 133.310° (True).

State: New Mexico  
Field: Vacuum Field (PAWC)  
Project: Lea County  
Structure: Sec. 26-T17S-R34E



**Customer:** Mobil Exploration  
**State:** New Mexico  
**Field:** Vacuum Field (PAWC)  
**Project:** Lea County  
**Structure:** Sec. 26-T17S-R34E  
**Well:** NV ABO # 156



Submit 3 Copies  
to Appropriate  
District Office

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-103  
Revised 1-1-89

**OIL CONSERVATION DIVISION**

**STRICT I**  
P.O. Box 1980, Hobbs NM 88241-1980

2040 Pacheco St.  
Santa Fe, NM 87505

**DISTRICT II**  
P.O. Drawer DD, Artesia, NM 88210

**DISTRICT III**  
1000 Rio Brazos Rd., Aztec, NM 87410

WELL API NO. <b>30-025-23696</b>
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. <b>B-1520-1</b>
7. Lease Name or Unit Agreement Name <b>NORTH VACUUM ABO UNIT</b>
8. Well No. <b>156W</b>
9. Pool name or Wildcat <b>NORTH VACUUM ABO</b>
10. Elevation (Show whether DF, RKB, RT, GR, etc.) <b>4025' GR</b>

**SUNDRY NOTICES AND REPORTS ON WELLS**  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:  
OIL WELL  GAS WELL  OTHER  INJECTOR/SIDETRACK

2. Name of Operator **MOBIL PRODUCING TX & NM INC.\***  
**\*MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM**

3. Address of Operator  
**P.O. Box 633 Midland, TX 79702**

4. Well Location  
Unit Letter **J** ; **1893** Feet From The **SOUTH** Line and **1800** Feet From The **EAST** Line  
Section **23** Township **17S** Range **34E** NMPM **LEA** County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)  
**4025' GR**

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

**NOTICE OF INTENTION TO:**

PERFORM REMEDIAL WORK  PLUG AND ABANDON   
TEMPORARILY ABANDON  CHANGE PLANS   
PULL OR ALTER CASING   
OTHER:

**SUBSEQUENT REPORT OF:**

REMEDIAL WORK  ALTERING CASING   
COMMENCE DRILLING OPNS.  PLUG AND ABANDONMENT   
CASING TEST AND CEMENT JOB   
OTHER: SIDETRACK/INJECTOR

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

**BHL: UT LTR I, SEC. 23, T17S, R34E**  
**656' FSL & 696' FEL**

SEE ATTACHED

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

SIGNATURE Shirley Houchins TITLE ENV & REG TECHNICIAN DATE 1-29-98

TYPE OR PRINT NAME SHIRLEY HOUCHINS TELEPHONE NO. 915 688-2585

(This space for State Use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

**ATTACHMENT C-103**  
**NORTH VACUUM ABO UNIT #156W**  
**API # 30-025-23696**

11-14-97 MIRU WELLCO RIG #91. BLEED WELL DOWN, ND WELLHEAD, NU BOP. READY TO PULL TBG IN AM.

11-15-97 OPEN TBG TO PIT, FLOW DN. REL. TBG ANCHOR ASSY. FLOW OUT BACKSIDE. KILL TBG W/30 BBL 10# BRINE. POOH & LD 2 7/8" TBG. MIRU LOGGERS, RUN GUAGE RING & GR, CORRELATE & SET TOP CIBP @ 8370'. (COLLAR @ 8376'). PRESSURE TEST TO 750#. SDFN.

11-16-97 OPEN CASING VALVE, WELL FLOWING, CIBP NOT HOLDING. CALL OUT WEDGE WL, WO TRUCK. MIRU WL, RIH W/ALPH TOP DRILL CIBP, SET TOP OF PLUG @ 8364'. FLOW SHUT OFF. PRESSURE TEST TO 750#. PU & RIH W/NEW AOH DP. SDFN.

11-17-97 CONT IN HOLE W/AOH DP, TAG ON CIBP @ 8356' TBG TALLY. CORRECT TO WL DEPTH OF 8364'. POOH W/STD DP, WORK ON RIG. SDFN.

11-18-97 POOH W/MILLS, RIH W/WEATHERFORD WHIPSTOCK TOOL W/SHEAR TOOL, CK & ORIENT TF TO 132 AZ, SET WHIPSTOCK, RAN GYRO SURVEYS TO SURFACE. SWI, SDFN.

11-19-97 R/U HES PICKEL DRLG PIPE W/500 GALS 15% HCL ACID, P/U SWIVEL, START DRLG W/STARTER MILL F/8348' CUT 18" CIRC CLEAN, POOH W/MILL. SWI, SDFN.

11-20-97 RIH W/WEATHERFORD WINDOW MILL + WATERMELLON MILL ON 2 7/8" AOH DP, SECURE WELL, DN FOR REPAIRS.

11-22-97 MILL WINDOW & DRILL 4' FORMATION. TD = 8358'. TOP OF WHIPSTOCK = 8348', BTM OF WINDOW = 8354'. PUMPED TWO SWEEPS & CIRC. HOLE CLEAN. RIG DOWN PULLING UT., CLEAN LOCATION, CREW TO YARD.

11-25-97 MIRU WELLCO RIG #89 & HORIZONTAL EQUIP. SPOT & RU PUMPS, PITS, & LINES. POOH & LD AOH DP, LD WINDOW & WATERMELON MILLS., RIH W/CURVE BLDG ASSY. TO 8358'. RU SWIVEL, CIRC HOLE. RU GYRO DATA, RIH W/GYRO TO TD, TIME DRILL CURVE F/8358-8362' TD.

11-26-97 CONT TIME DRLG W/GYRO F/8362-8505' (8482' TVD).

11-27-97 CONT DRILL CURVE F/8505-8611' TD. LD CURVE MOTOR, BIT & MWD. PU LATERAL MOTOR, TIH W/LATERAL ASSY TO 8611'. DRILL NEW FORMATION F/8611-8670' MD. LAST SURVEY @ 8640', 89.4 DEG, 127 DEG AZ, 215.67 VERTICAL SECTION.

11-28-97 DRILL LATERAL #1A1 F/8670-8888' TMD.

11-29-97 SLIDE, ROTATE DRILL F/8888-9290' TMD.

11-30-97 CONT. DRILL F/9290-9413' TMD, TD WELL W/956' VERTICAL SECT. @ 87.5 DEG ANGLE, 126 DEG DIR, TVD 8521', POOH & LD DP, DC'S, PH6 & SPERRY BHA. LD SWIVEL. RIH W/BKR PIP INFLATABLE PKR, PLUG IN PLACE.

12-01-97 FIN RIH W/BKR INFLATABLE PKR. SET @ 8604'. EOT @ 8641'. MOVE OUT SUBSTRUCTURE, ND BOP, NU 2 7/8" TBG HANGR, SWI, CONT. RD, WO/DAYLIGHT, RELEASE RIG @ 8:30 AM. END OF DRILLING JOB. LAST REPORT.

ATTACHMENT C-103  
NORTH VACUUM ABO UNIT #156W  
API # 30-025-23696  
PAGE 2

12-05-97 MIRU HES CT UT. FILLED CT W/F-WTR INSTALLED OS TO FISH PROB. RIH ON CT TO 8610' FISHED PROB TBG PSI F/0# TO 1200#. EQUIP POOH W/PROB.  
12-06-97 REMOVE PROB. RIH TO FISH VALUE, FISHED, POH REC. RDMO HESS EQUIP. SECURED WELL, WO COMPLETION.

COMPLETION:

12-12-97 MIRU WELLCO RIG #91. ND TBG HANGAR, NU BOP, UNSET BKR INFLATABLE PKR. FLOW DN, PUMP 50 BBL 10# BRINE, KILL TBG. POOH & LD PKR. PU GUIBERSON UNI-VI PKR, SDFN, PKR SWINGING IN HOLE.  
12-13-97 SITP 200#, SICP 150#, OPEN UP & BLEED OFF GAS. RIH W/ 2 7/8" TBG, TESTING TO 7000 PSI, SET PKR @ 8280', TEST BACKSIDE TO 500 PSI-GOOD. , EOT @ 8621'. SDFN :& SUNDAY.  
12-15-97 MIRU HALLIBURTON, PRESSURE TEST LINES TO 8000 PSI. ACIDIZE ABO OPEN HOLE W/10,000 GALS 20% HCL, (8611-9413'), R/U TO FLOW BACK. LEAVE OPEN TO TANK OVERNIGHT.  
12-16-97 CONTINUE TO FLOW BACK. KILL TBG W/10# BRINE, POOH & LD 2 7/8" WS & GUIB UNI-VI PKR. PU GUIB G6 PKR, RIH ON 2 7/8" TBG, FLOW TO TANK, SDFN.  
12-17-97 WELL MADE 100 BBL ON, 20 BBL OIL. RDMO WELLCO RIG #91, LEAVE BOP ON WELL, SET HAND SLIPS, LEAVE FLOWING TO TANK.  
12-19-97 MIRU WELLCO #91. R/U KILL TBG. PU & RIH W/ 2 7/8" TBG. SET GUIBERSON G-6 PKR @ 8278', PRESSURE UP TO 500# ENSURE PKR SET. READY TO CIRC PKR FLUID. SWI, SDFN.  
12-22-97 R/U PUMP TRUCK, CIRC 190 BBL 1% FLUID. LATCH ONTO ON OFF TOOL. ND BOP, NU TREE. TEST BACKSIDE TO 500# FOR 30 MIN ON CHART. GOOD TEST. RDMO WELLCO RIG #91. TURN WELL TO PRODUCTION. PIT WILL BE BACKFILLED WHEN PROD DIGS OUT INJECTION LINES.