

DISTRICT I
P.O. Box 1950, Hobbs, NM 88241-1980
DISTRICT II
P.O. Box Drawer DD, Artesia, NM 88211-0719
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
P.O. Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-101
Revised February 10, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

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

AMENDED REPORT

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

¹ Operator Name and Address TEXACO EXPLORATION & PRODUCTION INC. 205 E. Bender, HOBBS, NM 88240		² OGRID Number 022351
		³ API Number 30 025 31875
⁴ Property Code 11125	⁵ Property Name VACUUM GLORIETA WEST UNIT	⁶ Well No. 108

⁷ Surface Location

UI or lot no.	Section	Township	Range	Lot.Idn	Feet From The	North/South Line	Feet From The	East/West Line	County
P	36	17-SO	34-EA		213	South	351	EAST	LEA
<i>BOTTOM HOLE LOCATION</i>									
P	36	17-S	34E		78	FSL	748	FEL	LEA
M	31	17-S	35E		375	FSL	227	FUL	LEA
⁹ Proposed Pool 1 Vacuum Glorieta unitized interval					¹⁰ Proposed Pool 2 Vacuum Glorieta unitized interval				

¹¹ Work Type Code P	¹² Well Type Code I	¹³ Rotary or C.T. R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation GR-3986', KB-4000'
¹⁶ Multiple No	¹⁷ Proposed Depth 6325'	¹⁸ Formation Upper Paddock	¹⁹ Contractor Phoenix	²⁰ Spud Date 3/1/98

²¹ Proposed Casing and Cement Program

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
11	8 5/8	24#	1475'	CL-C 650 SXS, CIRC.	
7 7/8	5 1/2	15.5# & 17	6325'	CL-H 1200 SX, CIRC. 1	

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.

Objective: Texaco intends to directionally drill dual horizontal laterals from this existing vertical wellbore and then return well to injection in the Upper Paddock Limestone interval.

- MIRU pulling unit. Release packer and TOH with packer & injection tubing. Run in hole with CIBP on wireline. Set CIBP at 5812'.
- Run in hole with 3" Whipback whipstock. Orient whipstock with gyro (orient face w/ azimuth = 74°). Set whipstock on top of CIBP at 5812'.
- Run in hole with starting mill to establish cut in casing (KOP @ 5811'). TOH with starting mill. TIH with watermelon mill, drillpipe, and drill collars. Mill 7" window. Drill 153' radius build section with EOB at 5964'. Directionally drill hor. section 600' from surface location (Eastbound lateral). TOH w/ bit.
- TIH with another whipstock. Orient whipstock azimuth relative to whipstock face at 5812' (azimuth of second whipstock 251°). Run in hole with starting mill to establish cut in casing (KOP @ 5767'). TOH with starting mill. TIH with watermelon mill, drillpipe, and drill collars. Mill 7" window. Drill 197' radius build section with EOB at 5964'. Directionally drill hor. section 600' from surface location (Westbound lateral). TOH with bit. Fish whipstock.
- TIH with injection tubing and packer and 140' tailpipe. Set packer at 5650'. Return well to injection and place on test.

²³ I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Darrell J. Carriger*

Printed Name: Darrell J. Carriger

Title: Prod. Engineer

Date: 2/6/98

Telephone: 397-0426

OIL CONSERVATION DIVISION

ORIGINAL SIGNED BY CHRIS WILLIAMS
DISTRICT I SUPERVISOR

Approved By: _____

Title: _____

Approval Date: **MAR 18 1998** Expiration Date: _____

Conditions of Approval:
Attached

DISTRICT I
P.O. Box 1380, Hobbs, NM 88241-1380

DISTRICT II
P.O. Box Drawer DD, Artesia, NM 88211-0719

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

DISTRICT IV
P.O. Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

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

Form C-102
Revised February 10, 1994
Instructions on back
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State Lease - 4 Copies
Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30 025 31875	² Pool Code 62160	³ Pool Name VACUUM GLORIETA
⁴ Property Code 11125	⁵ Property Name VACUUM GLORIETA WEST UNIT	
⁷ GGRID Number 022351	⁸ Operator Name TEXACO EXPLORATION & PRODUCTION INC.	⁶ Well No. 108
		⁹ Elevation GR-3986', KB-4000'

¹⁰ Surface Location

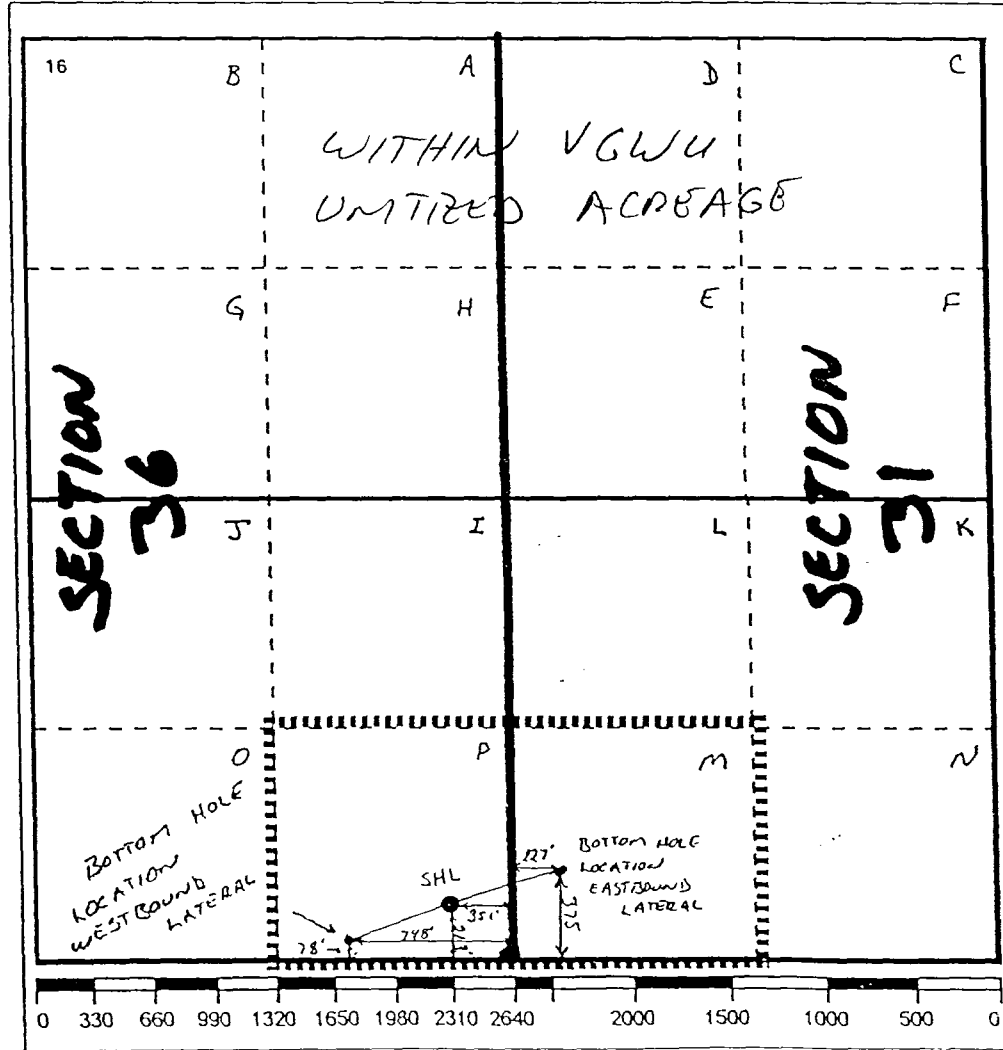
UI or lot no.	Section	Township	Range	Lot.Idn	Feet From The	North/South Line	Feet From The	East/West Line	County
P	36	17-SO	34-EA		213	South	351	EAST	LEA

¹¹ Bottom Hole Location If Different From Surface

UI or lot no.	Section	Township	Range	Lot.Idn	Feet From The	North/South Line	Feet From The	East/West Line	County
P	36	17S	34E		78	FSL	748	FEL	LEA
M	31	17S	35E		375	FSL	227	FWL	LEA

¹² Dedicated Acres 80	¹³ Joint or Infill No	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



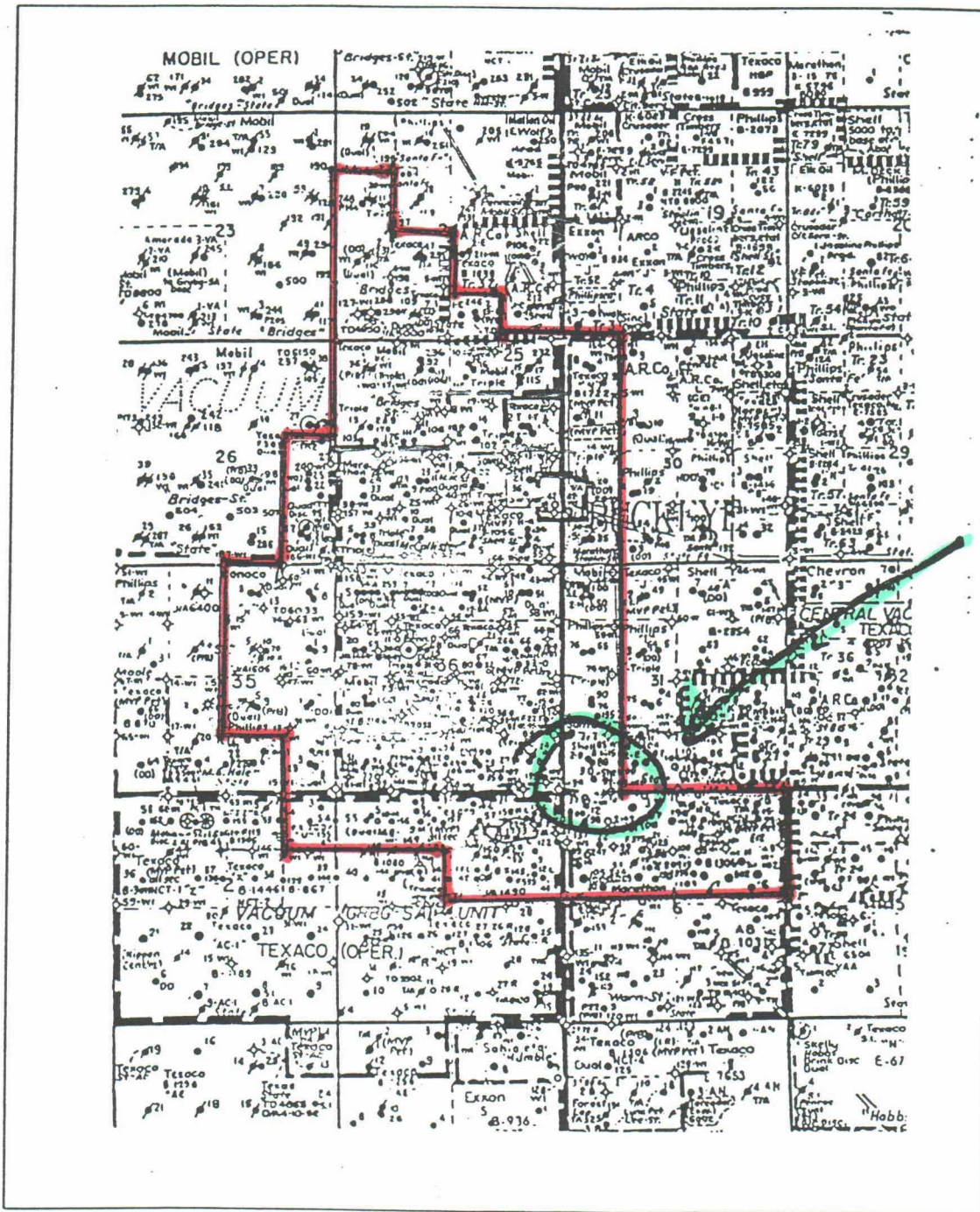
17 OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Signature: *Darrell J. Carriger*
Printed Name: Darrell J. Carriger
Position: Prod. Engineer
Date: 2/6/98

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 knowledge and belief.

Date Surveyed:
Signature & Seal of Professional Surveyor:
Certificate No.:

PROJECT AREA VGWU



Vacuum Glorieta West Unit #108
Texaco North American Producing
Darrell J. Carriger February 7, 1998



Open hole diameter = 11"

8-5/8" 24#/ft, WC-50
34 joints set at 1475'
Cemented with 450 sacks
Circulated

1475'

5-1/2" 17#/ft WC-50 (21 joints)
5-1/2" 15.5#/ft LTC (131 joints)
Cemented with 1000 sacks
Circulated

Open hole diameter = 7-7/8"

2-3/8" Injection tubing

Injection Packer @ 5869'

Perforated Interval:
5957' - 6016'
6073' - 6100'
6147' - 6164'
2 jspf and 206 holes

Total Depth: 6325'
Plug Back TD: 6169'

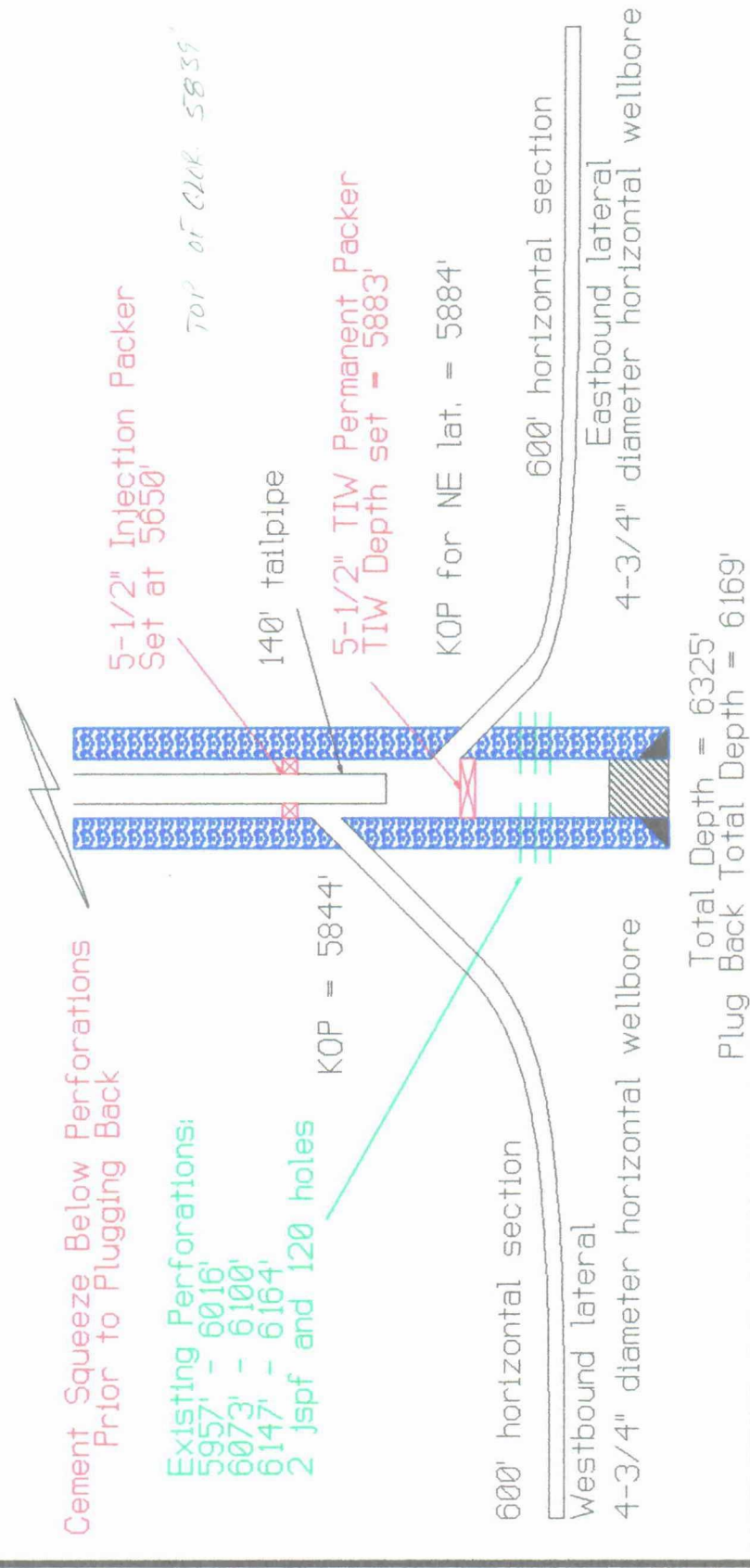
Vacuum Glorieta West Unit #108 - Dual Lateral Proposal

Texaco North American Producing 

Darrell J. Carriger - February 7, 1998

Cement Squeeze Below Perforations
Prior to Plugging Back

Existing Perforations:
5957' - 6016'
6073' - 6100'
6147' - 6164'
2 jspf and 120 holes





Job Number:
 Company: TEXACO E&P
 Lease/Well: VGWU #108
 Location: LEA COUNTY
 Rig Name: YALE E. KEY #119
 RKB:
 G.I. or M.S.L.:

State/Country: NEW MEXICO
 Declination: 9.11003
 Grid:
 File name: D:\DATA\TEXACO-1\VGWU\VGWU108\VGWU108.SVY
 Date/Time: 18-Mar-98 / 16:53
 Curve Name: NORTHEAST (LOWER) LATERAL (REV.1) - 3/18/98

PHOENIX DRILLING SERVICES, INC.

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 74.00
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

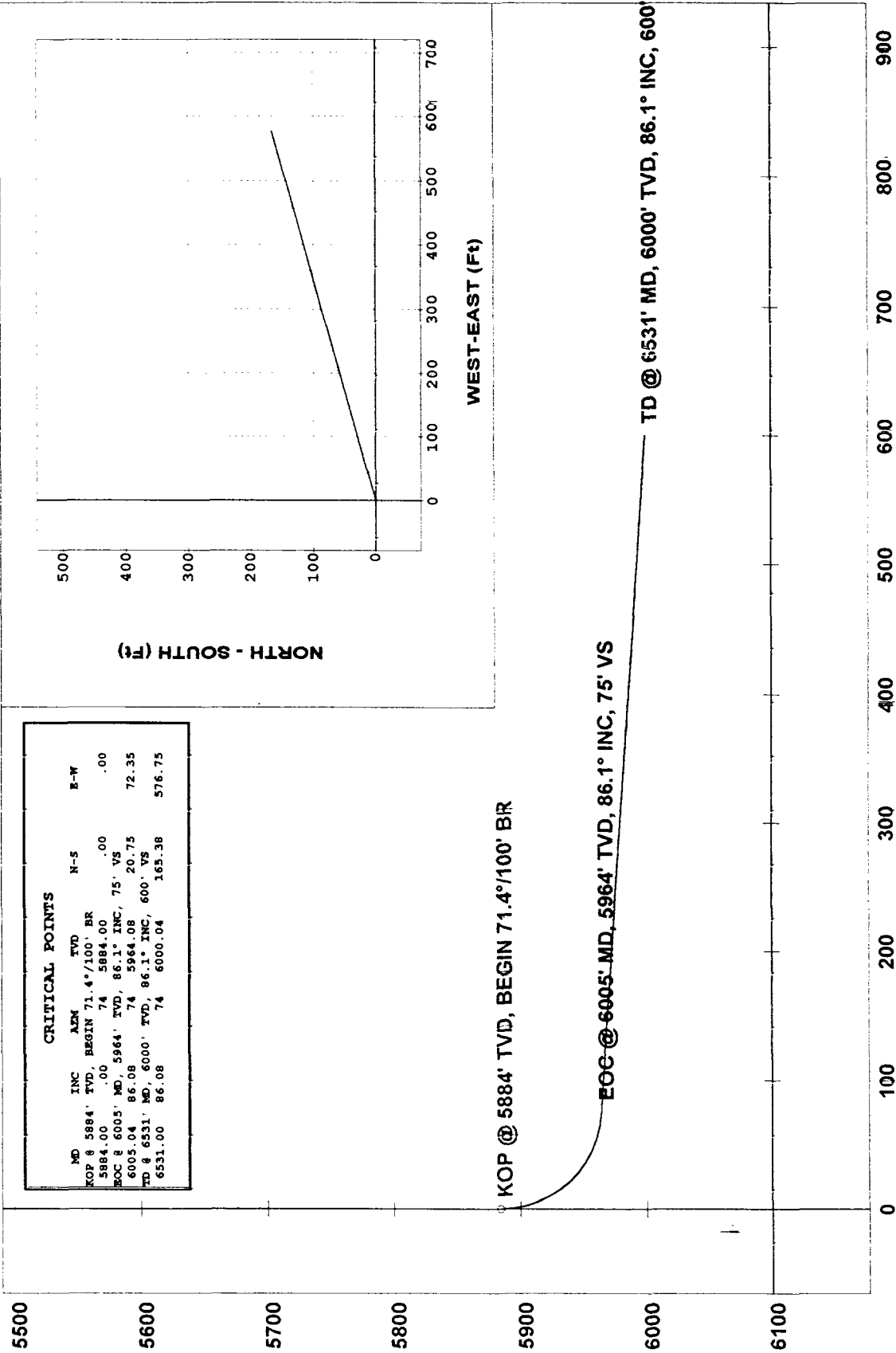
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
5884.00	.00	74.00	5884.00	.00	.00	.00	.00	.00	.00
5894.00	7.14	74.00	5893.97	.17	.60	.62	.62	74.00	71.45
5904.00	14.29	74.00	5903.79	.68	2.38	2.48	2.48	74.00	71.45
5914.00	21.43	74.00	5913.31	1.53	5.33	5.55	5.55	74.00	71.45
5924.00	28.58	74.00	5922.36	2.69	9.39	9.77	9.77	74.00	71.45
5934.00	35.72	74.00	5930.82	4.16	14.50	15.09	15.09	74.00	71.45
5944.00	42.87	74.00	5938.56	5.90	20.59	21.42	21.42	74.00	71.45
5954.00	50.01	74.00	5945.44	7.90	27.55	28.66	28.66	74.00	71.45
5964.00	57.16	74.00	5951.38	10.12	35.28	36.70	36.70	74.00	71.45
5974.00	64.30	74.00	5956.26	12.52	43.66	45.42	45.42	74.00	71.45

KOP @ 5884' TVD, BEGIN 71.4°/100' BR

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
5984.00	71.45	74.00	5960.03	15.07	52.56	54.68	54.68	74.00	71.45
5994.00	78.59	74.00	5962.61	17.73	61.84	64.33	64.33	74.00	71.45
EOC @ 6005' MD, 5964' TVD, 86.1° INC, 75' VS									
6005.04	86.08	74.00	5964.08	20.75	72.35	75.26	75.26	74.00	67.85
6105.04	86.08	74.00	5970.92	48.24	168.25	175.03	175.03	74.00	.00
6205.04	86.08	74.00	5977.75	75.74	264.15	274.80	274.80	74.00	.00
6305.04	86.08	74.00	5984.59	103.24	360.05	374.56	374.56	74.00	.00
6405.04	86.08	74.00	5991.42	130.74	455.95	474.33	474.33	74.00	.00
6505.04	86.08	74.00	5998.26	158.24	551.85	574.09	574.09	74.00	.00
TD @ 6531' MD, 6000' TVD, 86.1° INC, 600' VS									
6531.00	86.08	74.00	6000.04	165.38	576.75	600.00	600.00	74.00	.00

Company: TEXACO E&P
 Lease/Well: VGWU #108
 Location: LEA COUNTY
 Rig Name: YALE E. KEY #119
 State/Country: NEW MEXICO
 Declination: 9.11003

Grid: D:\DATA\TEXACO~1\VGWU\VGWU108\VGWU108.SVY
 File name: D:\DATA\TEXACO~1\VGWU\VGWU108\VGWU108.SVY
 Date/Time: 18-Mar-98 / 16:53



° -- NORTHEAST (LOWER) LATERAL (REV.1) - 3/18/98

VERTICAL SECTION (Ft) @ 74.00°



Job Number:
Company: TEXACO E&P
Lease/Well: VGWU #108
Location: LEA COUNTY
Rig Name: YALE E. KEY #119
RKB:
G.L. or M.S.L.:

State/Country: NEW MEXICO
Declination: 9.11003
Grid:
File name: D:\DATA\TEXACO~1\VGWU\VGWU108\VGWU108.SVY
Date/Time: 18-Mar-98 / 16:43
Curve Name: SOUTHWEST (UPPER) LATERAL (REV.1) - 3/18/98

PHOENIX DRILLING SERVICES, INC.

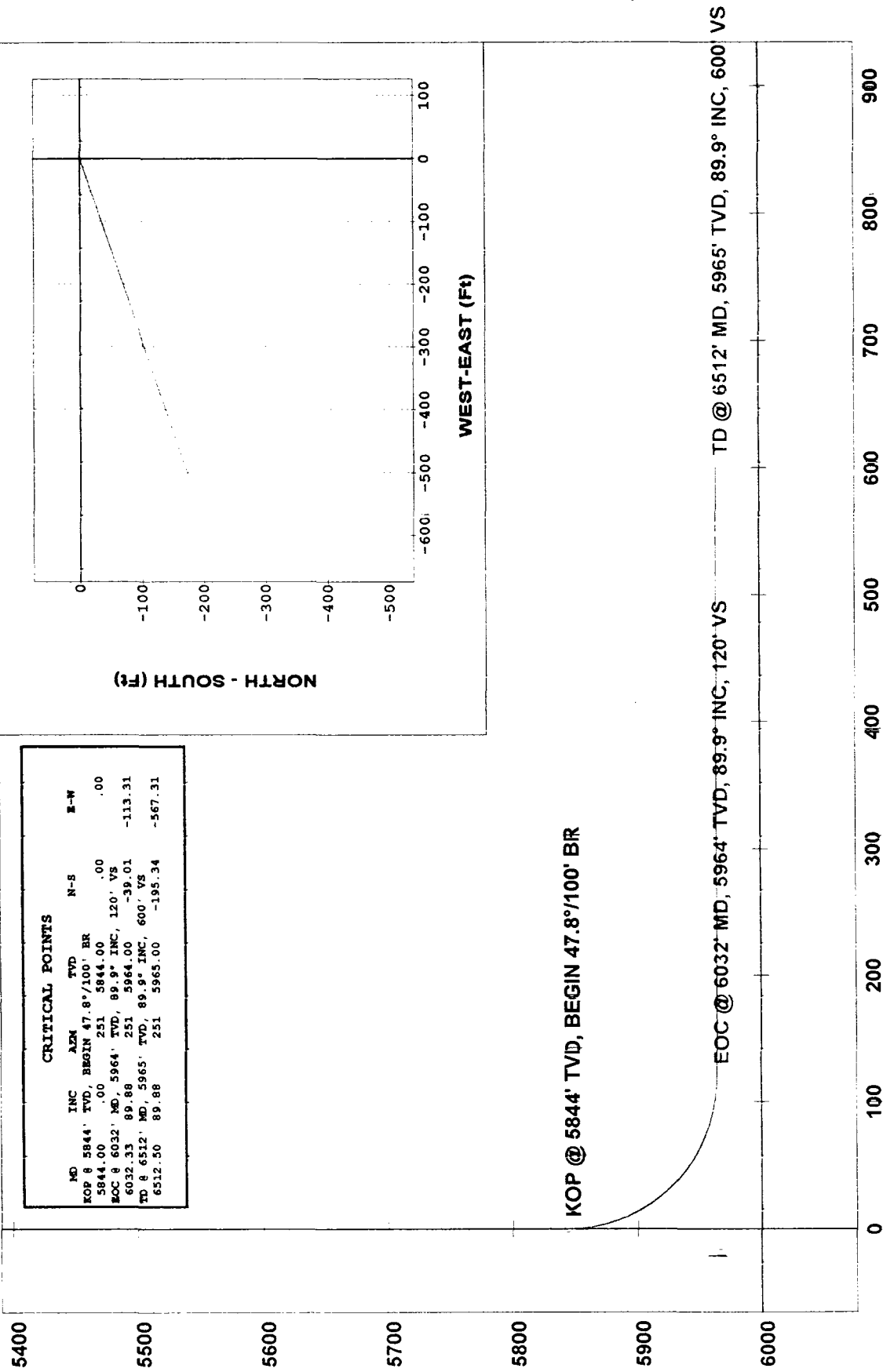
WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 251.00
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
KOP @ 5844' TVD, BEGIN 47.8°/100' BR									
5844.00	.00	251.00	5844.00	.00	.00	.00	.00	.00	.00
5854.00	4.77	251.00	5853.99	-14	-39	.42	.42	251.00	47.75
5864.00	9.55	251.00	5863.91	-54	-157	1.66	1.66	251.00	47.75
5874.00	14.32	251.00	5873.69	-121	-353	3.73	3.73	251.00	47.75
5884.00	19.10	251.00	5883.26	-215	-625	6.61	6.61	251.00	47.75
5894.00	23.87	251.00	5892.57	-334	-971	10.27	10.27	251.00	47.75
5904.00	28.65	251.00	5901.53	-478	-1389	14.69	14.69	251.00	47.75
5914.00	33.42	251.00	5910.10	-646	-1876	19.84	19.84	251.00	47.75
5924.00	38.20	251.00	5918.20	-836	-2429	25.69	25.69	251.00	47.75
5934.00	42.97	251.00	5925.80	-1048	-3044	32.20	32.20	251.00	47.75

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
5944.00	47.75	251.00	5932.82	-12.80	-37.17	39.31	39.31	251.00	47.75
5954.00	52.52	251.00	5939.23	-15.30	-44.42	46.98	46.98	251.00	47.75
5964.00	57.30	251.00	5944.98	-17.96	-52.16	55.16	55.16	251.00	47.75
5974.00	62.07	251.00	5950.02	-20.77	-60.32	63.79	63.79	251.00	47.75
5984.00	66.84	251.00	5954.33	-23.71	-68.85	72.81	72.81	251.00	47.75
5994.00	71.62	251.00	5957.88	-26.75	-77.68	82.16	82.16	251.00	47.75
6004.00	76.39	251.00	5960.63	-29.88	-86.77	91.77	91.77	251.00	47.75
6014.00	81.17	251.00	5962.58	-33.07	-96.04	101.58	101.58	251.00	47.75
6024.00	85.94	251.00	5963.70	-36.30	-105.44	111.51	111.51	251.00	47.75
EOC @ 6032' MD, 5964' TVD, 89.9° INC, 120' VS									
6032.33	89.88	251.00	5964.00	-39.01	-113.31	119.83	119.83	251.00	47.27
6132.33	89.88	251.00	5964.21	-71.57	-207.86	219.83	219.83	251.00	.00
6232.33	89.88	251.00	5964.42	-104.13	-302.41	319.83	319.83	251.00	.00
6332.33	89.88	251.00	5964.63	-136.68	-396.96	419.83	419.83	251.00	.00
6432.33	89.88	251.00	5964.84	-169.24	-491.51	519.83	519.83	251.00	.00
TD @ 6512' MD, 5965' TVD, 89.9° INC, 600' VS									
6512.50	89.88	251.00	5965.00	-195.34	-567.31	600.00	600.00	251.00	.00

Company: TEXACO E&P
 Lease/Well: VGWU #108
 Location: LEA COUNTY
 Rig Name: YALE E. KEY #119
 State/Country: NEW MEXICO
 Declination: 9.11003

Grid:
 File name: D:\DATA\TEXACO~1\VGWU\VGWU108\VGWU108.SVY
 Date/Time: 18-Mar-98 / 16:43



-- SOUTHWEST (UPPER) LATERAL (REV.1) - 3/18/98
VERTICAL SECTION (Ft) @ 251.00°