

DISTRICT I

P.O. Box 1980, 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
⁴ Property Code 11122		³ API Number 30-025-03084
⁵ Property Name CENTRAL VACUUM UNIT		⁶ Well No. 110

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
J	6	18S	35E		1980	SOUTH	2310	EAST	LEA

⁸ Proposed 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
I / K	6	18S	35E		2376 / 2283	S / S	330 / 1846	E / W	LEA

⁹ Proposed Pool 1

VACUUM GRAYBURG SAN ANDRES (UNITIZED INTERVAL)

¹⁰ Proposed Pool 2

¹¹ Work Type Code P	¹² WellType Code O	¹³ Rotary or C.T. R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 3975'
¹⁶ Multiple No	¹⁷ Proposed Depth 4710	¹⁸ Formation SAN ANDRES	¹⁹ Contractor UNKNOWN	²⁰ Spud Date 12/30/97

²¹ Proposed Casing and Cement Program

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
NO CHANGE					

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.

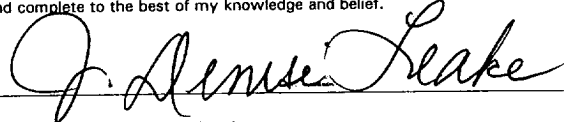
Objective: Texaco intends to directionally drill a 1033' and a 2019' horizontal lateral section from the subject wellbore.

1. MIRU pulling unit. POH with production equipment.
2. Run in hole with mill, motor, collars and drill pipe. Start East lateral in open hole at ~4200' with a build radius of 200'.
3. Directionally drill to the ENE bottom hole location 2020' away. TOH with equipment.
4. Set CIBP at 4020'. Run in hole with whipstock. Run GYRO to orient whipstock.
5. TIH with mill, motor, collars, and drill pipe. Mill window in casing. Start West lateral with a build radius of 250'.
6. Directionally drill to the WNW bottom hole location 1100' away. TOH with equipment.
7. Retrieve whipstock. Drill CIBP.
8. Acidize laterals using 20-30 gal per foot of pay using coiled tubing and foam dispersant.
9. Run production equipment and return to production.

PROJECT AREA
CIVA
PRODUCTION INTERVAL
GRAYBURG - SA

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



Printed Name

J. Denise Leake

Title Engineering Assistant

Date 12/18/97

Telephone 397-0405

OIL CONSERVATION DIVISION

ORIGINAL SIGNED BY CHRIS WILLIAMS
DISTRICT I SUPERVISOR

Approved By:

Title:

Approval Date DEC 23 1997

Expiration Date:

Conditions of Approval:

Attached ☐

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DISTRICT IV

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

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised February 10, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-03084	² Pool Code 62180	³ Pool Name VACUUM GRAYBURG SAN ANDRES
⁴ Property Code 11122	⁵ Property Name CENTRAL VACUUM UNIT	⁶ Well No. 110
⁷ OGRID Number 022351	⁸ Operator Name TEXACO EXPLORATION & PRODUCTION INC.	⁹ Elevation 3975'

¹⁰ Surface Location

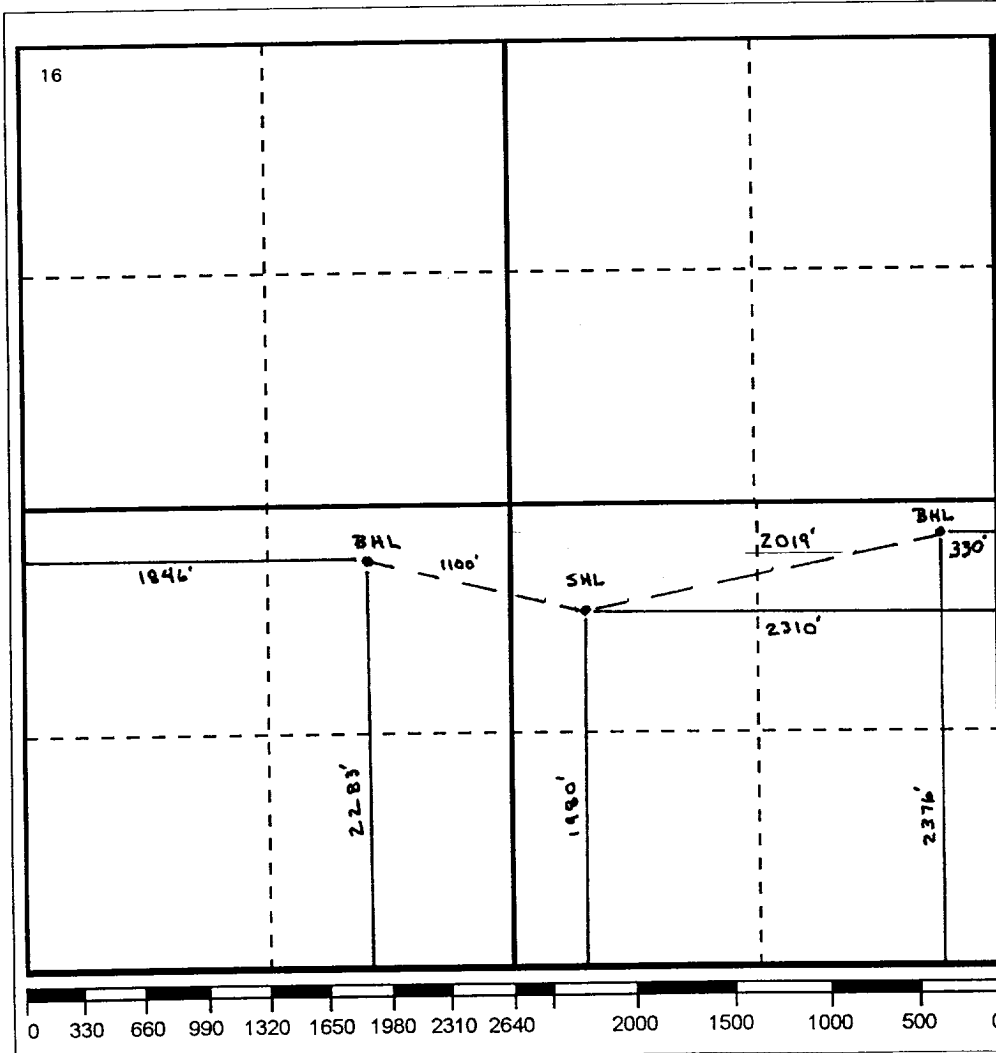
UI or lot no.	Section	Township	Range	Lot.Idn	Feet From The	North/South Line	Feet From The	East/West Line	County
J	6	18S	35E		1980	SOUTH	2310	EAST	LEA

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
I/K	6	18S	35E		2376/ 2283	S/S	330/ 1846	E / W	LEA

¹² Dedicated Acres 40	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

Printed Name

J. Denise Leake

Position

Engineering Assistant

Date

12-18-97

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.

CENTRAL VACUUM UNIT LEA COUNTY, NM

Production Satellites

Phillips - Mable Hale COOP

Texaco- Vacuum Grayburg SA Unit

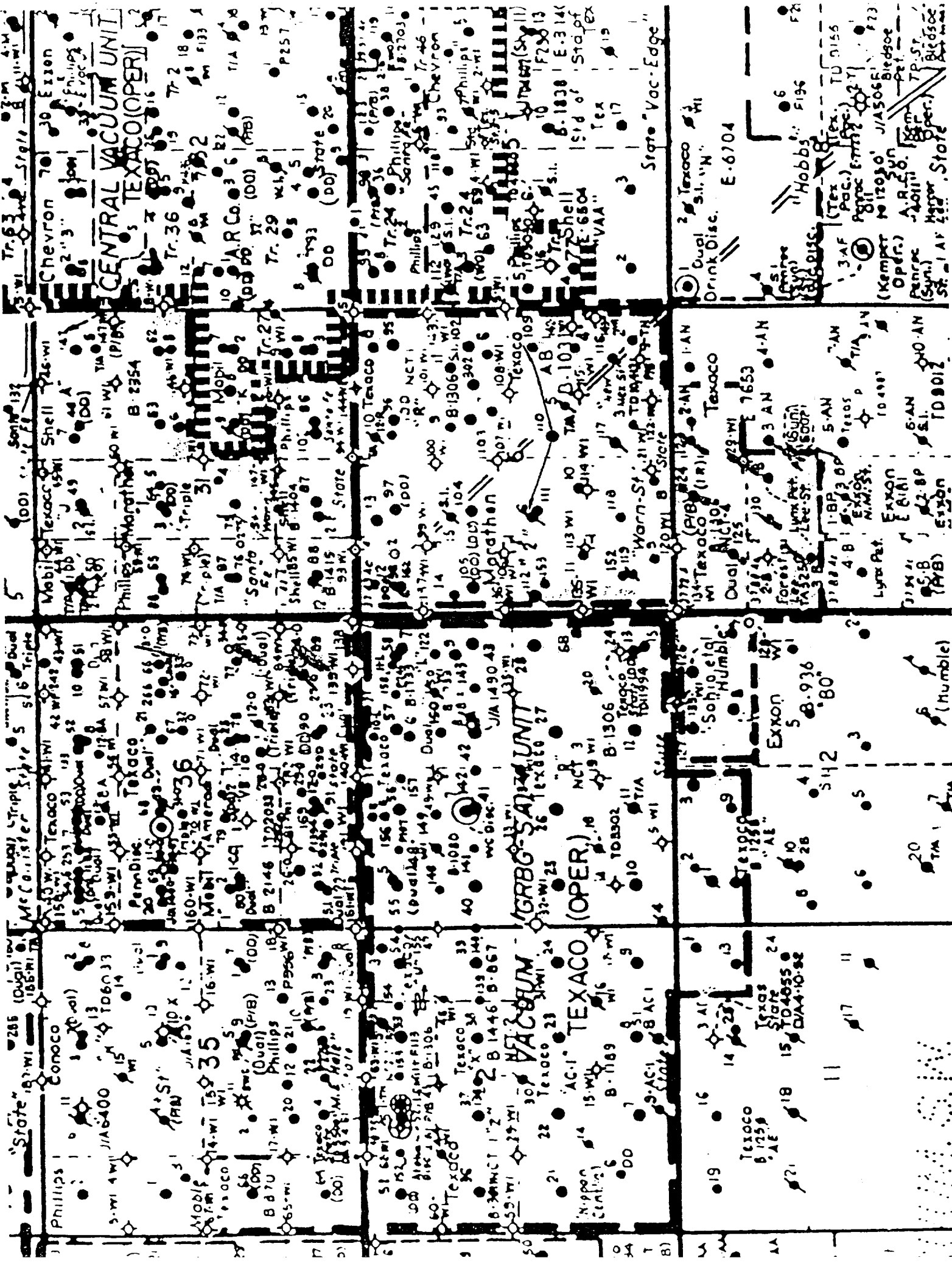
Phillips - East Vacuum Grayburg SA Unit

LEGEND

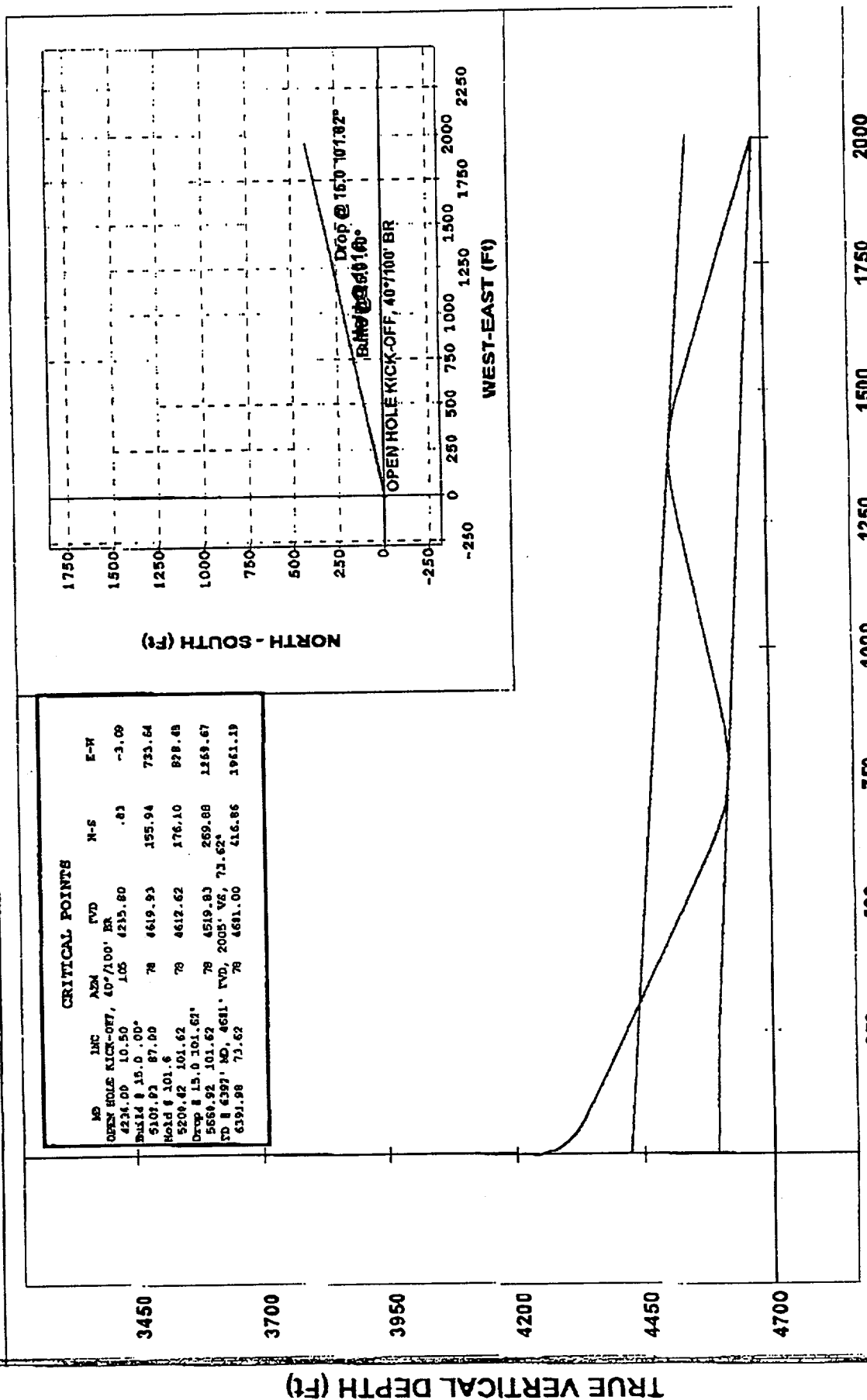
- Active Oil Producer
- ▲ Active Water Injection Well
- ⊙ Inactive well (SI, TA, ASD)
- ⊗ Plugged and Abandoned Well

1 mile





Company: TEXACO E&P
 Lease/Well: CENTRAL VACUUM UNIT #110
 Location: LEA COUNTY
 Declination:
 File name: C:\TEXACO\110\CVU110\CVU110.SVY
 Date/Time: 22-Dec-97 / 13:18



PROPOSAL - NE (LWR) LAT

VERTICAL SECTION / EAS @ 78 00°



Job Number:

Company: TEXACO E&P

LeaseWell: CENTRAL VACUUM UNIT #110

Location: LEA COUNTY

Rig Name:

RKB:

G.L. or M.S.L.:

State/Country: NEW MEXICO

Declination:

Grid:

File name: C:\TEXACO-1\CVUICVU110\CVU110.SVY

Date/Time: 22-Dec-97 / 13:18

Curve Name: PROPOSAL - NE (LWR) LAT

PHOENIX DRILLING SERVICES, INC.

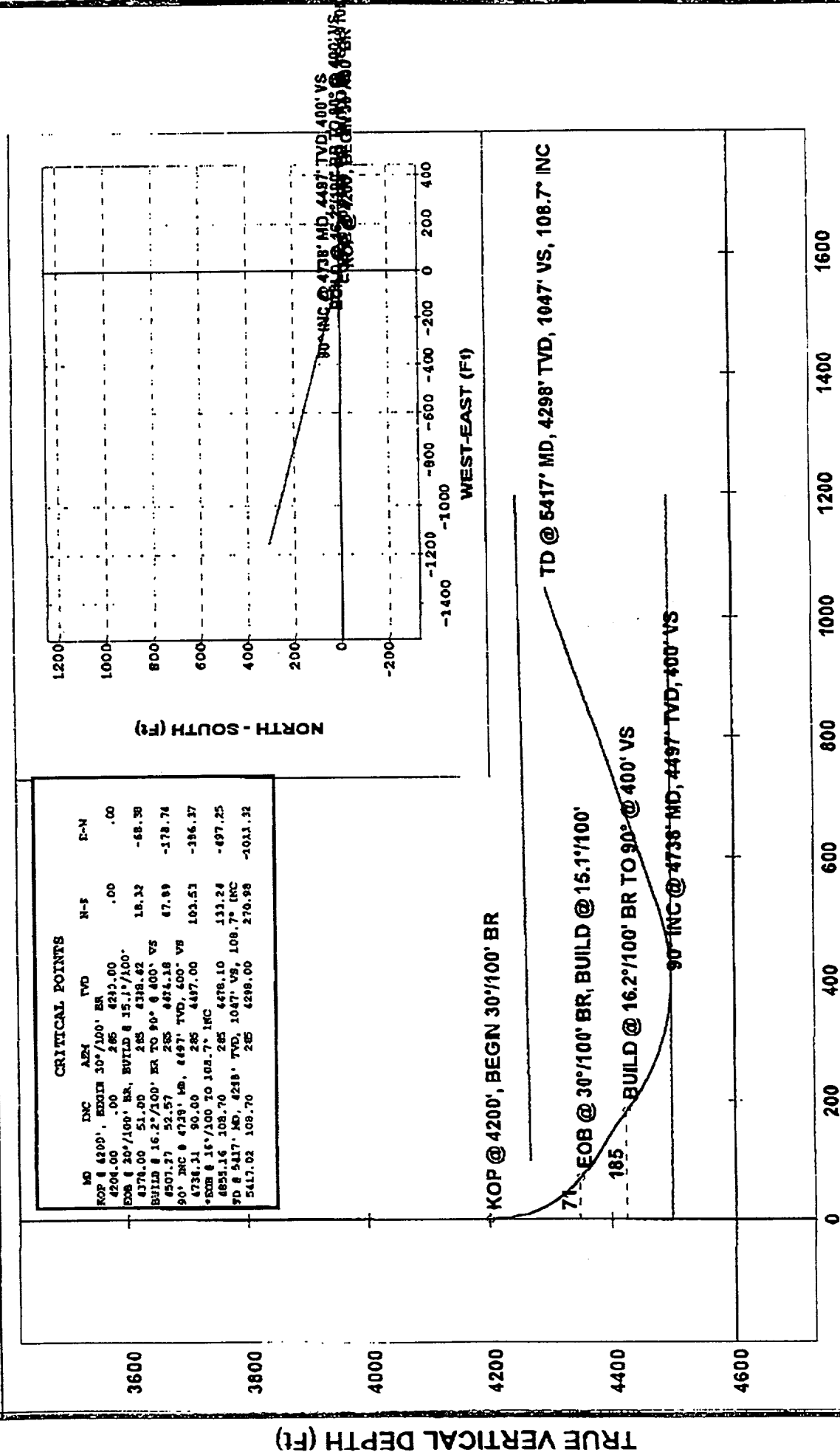
 WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 78.00

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
4200.00	.00	285.00	4200.00	.00	.00	.00	.00	.00	.00
4210.00	3.00	285.00	4210.00	.07	-.25	-.23	.26	285.00	30.00
4220.00	6.00	285.00	4219.96	.27	-1.01	-.93	1.05	285.00	30.00
4230.00	9.00	285.00	4229.88	.61	-2.27	-2.10	2.35	285.00	30.00
4235.00	10.50	285.00	4234.80	.83	-3.09	-2.85	3.20	285.00	30.00
OPEN HOLE KICK-OFF, 40'/100' BR									
4236.00	10.50	105.00	4235.80	.83	-3.09	-2.85	3.20	285.00	2100.00
4246.00	14.57	96.02	4245.56	.46	-.96	-.84	1.06	295.66	45.00
4256.00	18.83	90.98	4255.14	.30	1.91	1.93	1.93	81.05	45.00
4266.00	23.18	87.73	4264.47	.35	5.49	5.44	5.50	86.34	45.00
4276.00	27.58	85.46	4273.50	.61	9.77	9.68	9.79	86.41	45.00
4286.00	32.00	83.77	4282.18	1.08	14.71	14.62	14.75	85.79	45.00

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	
4298.00	36.44	82.46	4290.45	1.76	20.29	20.21	20.37	85.04	45.00
4306.00	40.89	81.38	4298.25	2.64	26.47	26.45	26.61	84.30	45.00
4316.00	45.34	80.48	4305.55	3.72	33.22	33.27	33.43	83.61	45.00
4326.00	49.81	78.70	4312.30	4.99	40.48	40.64	40.80	82.97	45.00
4336.00	54.27	78.02	4318.44	6.45	48.24	48.52	48.67	82.38	45.00
4346.00	58.75	78.39	4323.98	8.08	56.41	56.86	56.99	81.85	45.00
4356.00	63.22	77.82	4328.81	9.89	64.97	65.60	65.72	81.35	45.00
4359.56	64.81	77.62	4330.37	10.57	68.09	68.80	68.91	81.18	45.00
4359.63	64.78	77.62	4330.40	10.58	68.16	68.87	68.97	81.18	45.00
4459.63	64.78	77.62	4373.02	29.98	156.52	159.33	159.36	79.16	.00
4559.63	64.78	77.62	4415.63	49.37	244.88	249.79	249.81	78.60	.00
4659.63	64.78	77.62	4458.25	68.77	333.24	340.26	340.26	78.34	.00
4759.63	64.78	77.62	4500.86	88.17	421.60	430.72	430.72	78.19	.00
4859.63	64.78	77.62	4543.48	107.58	509.98	521.18	521.18	78.09	.00
4954.68	64.77	77.62	4583.99	128.00	593.95	607.16	607.16	78.02	.01
4962.93	66.00	77.67	4587.43	127.60	601.27	614.66	614.66	78.02	15.00
4972.93	67.50	77.72	4591.38	129.56	610.25	623.85	623.85	78.01	15.00
4982.93	69.00	77.77	4595.08	131.53	619.33	633.14	633.14	78.01	15.00
4992.93	70.50	77.82	4598.54	133.51	628.50	642.52	642.52	78.01	15.00
5002.93	72.00	77.87	4601.76	135.51	637.75	651.99	651.99	78.00	15.00
5012.93	73.50	77.90	4604.72	137.51	647.09	661.54	661.54	78.00	15.00
5022.93	75.00	77.93	4607.44	139.53	656.50	671.16	671.16	78.00	15.00
5032.93	76.50	77.96	4609.90	141.55	665.98	680.86	680.86	78.00	15.00
5042.93	78.00	77.98	4612.10	143.58	675.52	690.61	690.61	78.00	15.00
5052.93	79.50	77.98	4614.05	145.63	685.11	700.42	700.42	78.00	15.00
5062.93	81.00	78.00	4615.75	147.68	694.75	710.27	710.27	78.00	15.00
5072.93	82.50	78.01	4617.18	149.73	704.43	720.17	720.17	78.00	15.00
5082.93	84.00	78.01	4618.36	151.80	714.14	730.10	730.10	78.00	15.00
5092.93	85.50	78.01	4619.27	153.86	723.88	740.06	740.06	78.00	15.00
Build @ 15.0 .00°									
5102.93	87.00	78.00	4619.93	155.94	733.84	750.03	750.03	78.00	15.00

Measured Depth FT	Ind Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
5132.93	91.50	78.00	4620.32	162.17	762.98	780.02	780.02	78.00	15.00
5162.93	96.00	78.00	4618.36	168.40	792.25	809.95	809.95	78.00	15.00
5192.93	100.50	78.00	4614.05	174.57	821.29	839.63	839.63	78.00	15.00
Hold @ 101.6									
5200.42	101.62	78.00	4612.62	176.10	828.48	846.98	846.99	78.00	15.00
5300.42	101.62	78.00	4592.47	198.48	924.29	944.94	944.94	78.00	.00
5400.42	101.62	78.00	4572.32	216.83	1020.10	1042.89	1042.89	78.00	.00
5500.42	101.62	78.00	4552.17	237.19	1115.90	1140.83	1140.83	78.00	.00
5600.42	101.62	78.00	4532.02	257.56	1211.71	1238.78	1238.78	78.00	.00
Drop @ 15.0 101.62°									
5650.92	101.62	78.00	4519.83	289.88	1289.67	1298.04	1298.04	78.00	.00
5660.98	101.61	78.00	4519.82	289.89	1289.73	1298.10	1298.10	78.00	15.00
5662.33	101.41	78.00	4519.55	270.18	1271.02	1299.42	1299.42	78.00	15.00
5678.41	99.00	78.00	4516.70	273.48	1286.51	1315.25	1315.25	78.00	15.00
5708.41	94.50	78.00	4513.18	279.65	1315.84	1345.03	1345.03	78.00	15.00
5738.41	90.00	78.00	4512.00	285.88	1344.95	1375.00	1375.00	78.00	15.00
5768.41	85.50	78.00	4513.18	292.11	1374.27	1404.97	1404.97	78.00	15.00
5798.41	81.00	78.00	4516.70	298.30	1403.40	1434.75	1434.75	78.00	15.00
5828.41	76.50	78.00	4522.55	304.42	1432.17	1464.17	1464.17	78.00	15.00
5847.60	73.62	78.00	4527.50	308.27	1450.30	1482.71	1482.71	78.00	15.00
5847.60	73.62	78.00	4555.70	328.22	1544.15	1578.65	1578.65	78.00	.00
6047.60	73.62	78.00	4583.89	348.17	1638.00	1674.59	1674.59	78.00	.00
6147.60	73.62	78.00	4612.09	368.11	1731.84	1770.53	1770.53	78.00	.00
6247.60	73.62	78.00	4640.29	388.06	1825.69	1866.47	1866.47	78.00	.00
6347.60	73.62	78.00	4668.48	408.01	1919.53	1962.42	1962.42	78.00	.00
TD @ 6392' MD, 4681' TVD, 2005' VS, 73.62°									
6391.98	73.62	78.00	4681.00	416.88	1981.19	2005.00	2005.00	78.00	.00

Company: TEXACO E&P
Lease/Well: CENTRAL VACUUM UNIT #110
Location: LEA COUNTY
Declination:
File name: C:\TEXACO~1\CVU\CVU110\CVU110.SWY
Date/Time: 22-Dec-97 / 12:19



CRITICAL POINTS				
MD	INC	ADZ	TVD	
KOP @ 4200'	EDGE 30°/100'	ER		
4204.00	.00	285	4232.00	.00
EXP @ 20°/100' NA	BUTL @ 15.1°/100'			
4378.00	51.00	285	4318.42	18.32
BUTL @ 16.2°/100'	ER TO 90°	@ 400'	VS	
4507.27	52.57	285	4434.18	47.99
90° INC @ 4739'	MD	4497'	TVD, 400'	VS
4736.31	90.00	285	4487.00	103.53
*EXP @ 16°/100 TO 102.7'	INC			
4855.16	108.70	285	4478.10	133.24
TD @ 5417'	MD, 4248'	TVD,	1047' VS,	108.7' INC
5417.02	108.70	285	4298.00	270.88
				-1011.32
				-178.74
				-68.39
				.00
				E-W

9 - PROPOSAL - NW (UPR) LAT

VERTICAL SECTION (Ft) @ 285.00°



Job Number:

Company: TEXACO E&P

LeaseWell: CENTRAL VACUUM UNIT #110

Location: LEA COUNTY

Rig Name:

RKB:

G.L. or M.S.L.:

State/Country: NEW MEXICO

Declination:

Grid:

File name: C:\TEXACO~1\CVUICV\U110CVU110.SVY

Date/Time: 22-Dec-97 / 12:19

Curve Name: PROPOSAL - NW (UPR) LAT

PHOENIX DRILLING SERVICES, INC.

 WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 285.00

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
KOP @ 4200', BEGIN 30°/100' BR									
4200.00	.00	285.00	4200.00	.00	.00	.00	.00	.00	.00
4210.00	3.00	285.00	4210.00	.07	-.25	.26	.28	285.00	30.00
4220.00	6.00	285.00	4219.96	.27	-1.01	1.05	1.05	285.00	30.00
4230.00	9.00	285.00	4229.88	.61	-2.27	2.35	2.35	285.00	30.00
4240.00	12.00	285.00	4239.71	1.08	-4.03	4.17	4.17	285.00	30.00
4250.00	15.00	285.00	4249.43	1.68	-6.29	6.51	6.51	285.00	30.00
4260.00	18.00	285.00	4259.02	2.42	-8.03	9.35	9.35	285.00	30.00
4270.00	21.00	285.00	4268.44	3.28	-12.25	12.69	12.69	285.00	30.00
4280.00	24.00	285.00	4277.68	4.27	-15.95	16.51	16.51	285.00	30.00
4290.00	27.00	285.00	4286.71	5.39	-20.11	20.82	20.82	285.00	30.00
4300.00	30.00	285.00	4295.49	6.62	-24.72	25.59	25.59	285.00	30.00

Measured Depth FT	Ind Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
4310.00	33.00	285.00	4304.02	7.97	-29.76	30.81	30.81	285.00	30.00
4320.00	36.00	285.00	4312.26	9.44	-35.23	36.48	36.48	285.00	30.00
4330.00	39.00	285.00	4320.19	11.02	-41.11	42.56	42.56	285.00	30.00
4340.00	42.00	285.00	4327.79	12.70	-47.38	49.06	49.06	285.00	30.00
4350.00	45.00	285.00	4335.05	14.48	-54.03	55.94	55.94	285.00	30.00
4360.00	48.00	285.00	4341.93	16.36	-61.04	63.19	63.19	285.00	30.00
EOB @ 30°/100' BR, BUILD @ 15.1°/100'									
4370.00	51.00	285.00	4348.42	18.32	-68.38	70.79	70.79	285.00	30.00
4400.00	55.53	285.00	4366.36	24.54	-91.60	94.83	94.83	285.00	15.10
4430.00	60.08	285.00	4382.35	31.11	-116.11	120.21	120.21	285.00	15.10
4440.26	61.61	285.00	4387.34	33.43	-124.76	129.16	129.16	285.00	15.10
4453.41	59.62	285.00	4393.80	36.40	-135.83	140.62	140.62	285.00	15.10
4466.56	57.64	285.00	4400.64	39.30	-146.88	151.85	151.85	285.00	15.10
4479.68	55.66	285.00	4407.86	42.14	-157.27	162.81	162.81	285.00	15.10
4492.67	53.89	285.00	4415.37	44.88	-167.50	173.41	173.41	285.00	15.10
4499.94	52.60	285.00	4419.73	46.39	-173.12	179.23	179.23	285.00	15.10
4500.11	52.57	285.00	4419.83	46.42	-173.25	179.36	179.36	285.00	15.10
4507.26	52.57	285.00	4424.18	47.89	-178.74	185.04	185.04	285.00	.00
BUILD @ 16.2°/100' BR TO 90° @ 400' VS									
4507.27	52.57	285.00	4424.18	47.89	-178.74	185.04	185.04	285.00	16.20
4508.94	52.84	285.00	4425.19	48.24	-180.02	186.37	186.37	285.00	16.20
4528.31	55.98	285.00	4436.47	52.31	-185.24	202.12	202.12	285.00	16.20
4558.31	60.84	285.00	4452.18	58.83	-219.91	227.67	227.67	285.00	16.20
4588.31	65.70	285.00	4465.67	65.86	-245.79	254.46	254.46	285.00	16.20
4618.31	70.56	285.00	4476.84	73.06	-272.67	282.29	282.29	285.00	16.20
4848.31	75.42	285.00	4485.61	80.48	-300.37	310.97	310.97	285.00	16.20
4878.31	80.28	285.00	4491.92	88.07	-328.69	340.28	340.28	285.00	16.20
4708.31	85.14	285.00	4495.73	95.77	-357.43	370.04	370.04	285.00	16.20
90° INC @ 4738' MD, 4497' TVD, 400' VS									
4738.31	90.00	285.00	4497.00	103.53	-388.37	400.00	400.00	285.00	16.20

Measured Depth FT	Ind Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
4768.31	94.80	285.00	4495.74	111.28	-415.31	429.86	429.86	285.00	16.00
4798.31	99.80	285.00	4491.99	118.98	-444.08	459.72	459.72	285.00	16.00
4828.31	104.40	285.00	4485.75	126.58	-472.39	489.06	489.06	285.00	16.00
EOB @ 16°/100 TO 108.7° INC									
4855.16	108.70	285.00	4478.10	133.24	-487.25	514.79	514.79	285.00	16.00
4955.16	108.70	285.00	4446.05	157.75	-588.74	609.51	609.51	285.00	.00
5055.16	108.70	285.00	4413.99	182.27	-680.24	704.23	704.23	285.00	.00
5155.16	108.70	285.00	4381.94	208.79	-771.73	798.98	798.98	285.00	.00
5255.16	108.70	285.00	4349.88	231.30	-863.23	893.68	893.68	285.00	.00
5355.16	108.70	285.00	4317.83	255.82	-954.73	988.40	988.40	285.00	.00
TD @ 5417' MD, 4288' TVD, 1047' VS, 108.7° INC									
5417.02	108.70	285.00	4298.00	270.98	-1011.32	1047.00	1047.00	285.00	.00