

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

OIL CONSERVATION DIVISION

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

Form C-10/
Revised February 10, 1999
Instructions on back
Submit to Appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies
☐ 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 020361		³ API Number 30 025 33814
⁵ Property Name NEW MEXICO 'E' STATE NCT-2		⁶ Well No. 1

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
K	23	19-S	36-E		1650	SOUTH	1980	WEST	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
K	23	19S	36E		2310	SOUTH	1650	WEST	LEA
⁹ Proposed Pool 1 MONUMENT ABO, <i>SOUTH</i>					¹⁰ Proposed Pool 2				

¹¹ Work Type Code <i>EP</i>	¹² Well Type Code O	¹³ Rotary or C.T. ROTARY	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 3729'
¹⁶ Multiple No	¹⁷ Proposed Depth 7500 TVD	¹⁸ Formation ABO	¹⁹ Contractor	²⁰ Spud Date 7/1/00

²¹ Proposed Casing and Cement Program					
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
11	9.625"	24#	1315'	620 SX, CIRC 59 SX	SURFACE
7 7/8	5 1/2	15.5 & 17#	7750'	3750 SX, CIRC 118 SX	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.

TEXACO INTENDS TO DRILL A HORIZONTAL RE-ENTRY IN THE SUBJECT WELL. THE OVERVIEW, PROPOSED WORK, AND SURVEY IS ATTACHED.

Permit Expires 1 Year From Approval
Date Unless ~~Drilling~~ Underway
Plug-Back

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.		OIL CONSERVATION DIVISION	
Signature <i>J. Denise Leake</i>			
Printed Name J. Denise Leake		Approved By:	
Title Engineering Assistant		Title:	
Date 6/12/00		Approval Date: <i>6/12/00</i>	Expiration Date:
Telephone 397-0405		Conditions of Approval: Attached ☐	

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State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
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Form C-102
Revised February 10, 1999
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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 33814	2 Pool Code 46979 46980	3 Pool Name MONUMENT ABO, <i>NORTH</i>
4 Property Code 020361	5 Property Name NEW MEXICO 'E' STATE NCT-2	6 Well No. 1
7 OGRID Number 022351	8 Operator Name TEXACO EXPLORATION & PRODUCTION INC.	9 Elevation 3729'

10 Surface Location

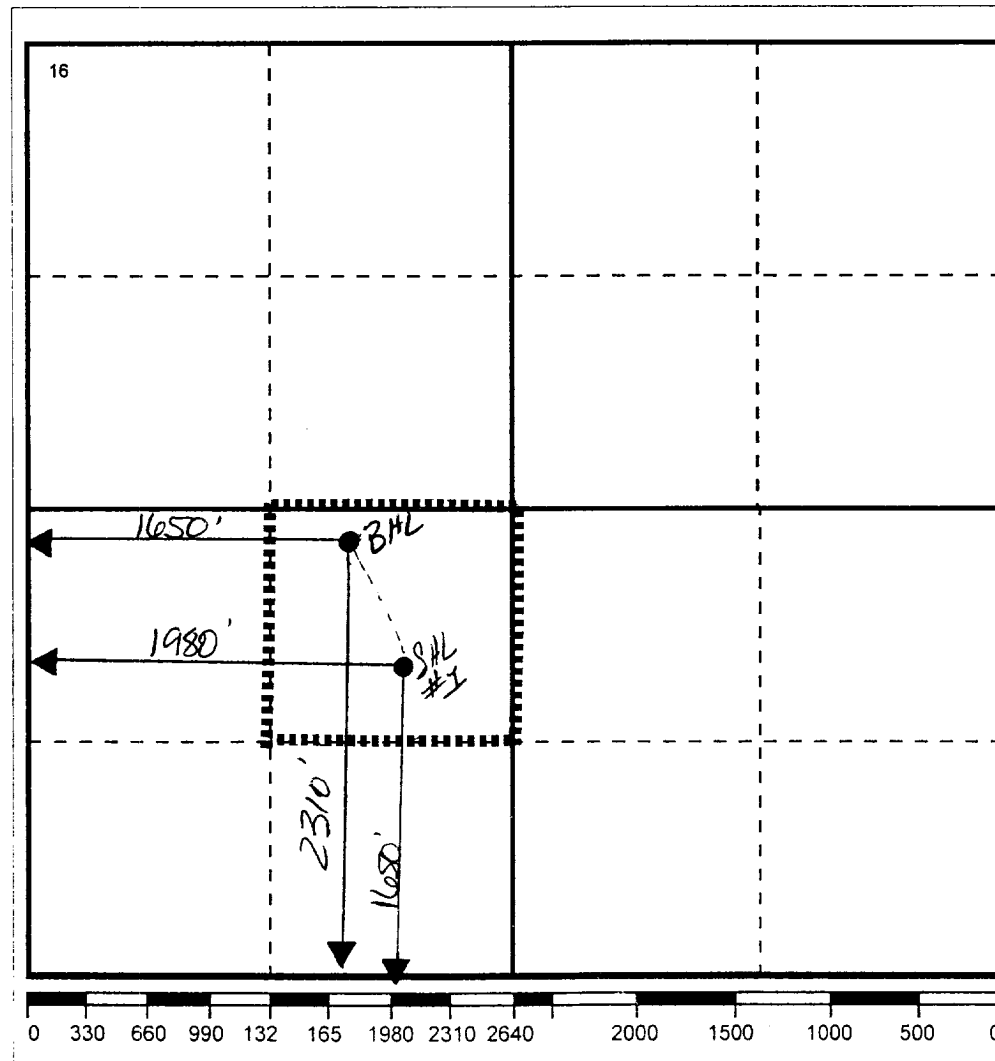
UI or lot no	Section	Township	Range	Lot.Idn	Feet From The	North/South Line	Feet From The	East/West Line	County
K	23	19-S	36-E		1650	SOUTH	1980	WEST	LEA

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
K	23	19S	36E		2310	SOUTH	1650	WEST	LEA

12 Dedicated Acre 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
J. Denise Leake

Printed Name
J. Denise Leake

Position
Engineering Assistant

Date
6/12/00

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.

10/12/2016
A
Received
Hobbs
000

OVERVIEW

The subject well was drilled in May 1997 and potentialled for 272 BOPD, 321 BWPD and 273 MCFD in the Monument Abo formation. The well is perforated from 7436 to 7682' (Abo – 246' gross, 68' net) and perforations from 6912 to 7318' (Abo – 406' gross, 64' net) have been squeezed with cement. This well has 5-1/2", 17#, WC-70 and 15.5#, WC-50 casing to 7750'. It is proposed to drill a +867 foot lateral (738' vertical section) at 333.5 degrees initial azimuth in the Monument Abo formation. The basic well plan is as follows:

- a) MIRU pulling unit. TOOH with the rods, pump and tubing. Run a bit and casing scraper to 7740' PBD. On wireline, set a 5-1/2" tubing retrievable bridge plug at +7193' (See attached correlation log). TIH and top off with 100 lbs. (approx. 7') 20/40 sand at 7186'. This should allow setting of the bottom trip whipstock for the top of window at 7174' and the bottom of window at 7180'. Test plug to 1000 psi. RDMO pulling unit.
- b) MIRU horizontal rig. TIH with dummy mills and tag top of sand and make correction. TIH with a 3 degree bottom trip whipstock and set.
- c) Drill a short radius curve using a 4-3/4" bit to a measured depth of +7300' (TVD +7265') with a 333.5 degree azimuth. The final angle will be 74 degrees from vertical. Drill +867' lateral. The end point will be +8168' MD, +7500' TVD and +738' vertical section.
- d) Retrieve the whipstock.
- d) Acidize the horizontal lateral using ported subs at 40 gallons/net foot 15% HCl.
- e) Pull ported subs. Retrieve the RBP. Place well on production.

50% LOST IN HOLE INSURANCE FOR THE DOWNHOLE MOTOR AND MWD IS INCLUDED WITH THE DAILY RATE FROM SCIENTIFIC DRILLING.

PROPOSED WORK

PRODUCTION HOLE:

Note: Perforated intervals that have been cement squeezed.

1. MIRU pulling unit. TOOH with rods, pump and tubing. TIH with 4-3/4" bit and casing scraper to 7400' PBD. TOOH.
2. On wireline, TIH with 5-1/2" tubing retrievable bridge plug and set at 7193' (Collars at 7070, 7114, 7159, 7203, 7248 and 7290'). TOOH with wireline. TIH with bailer and dump 100 lbs. 20/40 sand on top of RBP (100 lbs = 7 ft.). Pull up 500' and allow sand to settle. Tag top of sand with bailer at +7186'. This should allow setting of the bottom trip whipstock (top of window 7174', bottom of window 7180'). RDMO wireline.
3. Test plug to 1000 psi. RDMO pulling unit.
4. MIRU horizontal rig. TIH with dummy mills on PH-6 drill pipe and tag the top of the sand on the RBP at 7186'. Strap the pipe going in the hole. This measurement will be used when setting the whipstock. Accuracy is very important. Check the strap with the wire line measurement and make correction. TOOH.
5. TIH with bottom set retrievable whipstock, starting mill, orientation sub and drill pipe. Stop at a point 5-10' above the RBP and run a gyro. Take a gyro reading to determine the direction of the whipstock face. Rotate the pipe as needed to achieve the required direction (azimuth 333.5 degrees). Lower the pipe to within one foot of the RBP and take another gyro reading. Rotate pipe again, if necessary, to obtain the required direction. This step may need to be made several times until confident the whipstock is oriented in the proper direction. Pull the gyro to surface, recording the orientation of the wellbore.
6. Lower the drill pipe to set the whipstock. The weight indicator will jump indicating the plunger shear pin is sheared and the whipstock is set. Continue setting down to shear the starting mill bolt. The weight indicator will jump, indicating the bolt is sheared.
7. Pick up the power swivel and begin circulating. Pick up the drill pipe until the starting mill has cleared the whipstock and start rotation. Lower the drill pipe slowly until the torque gauge suggest the starting mill is contacting the casing. Adjust weight and speed until satisfied with the penetration rate. Mill to a predetermined depth that will assure the setting lug is completely removed and a cut out in the casing has been initiated. TOOH.

8. TIH with the metal muncher window mill, string mill and the watermelon mill. Resume milling operations and mill until the complete assembly has cleared the casing. Pick up and lower the string several times without rotation to assure a good clean window has been obtained. Circulate the hole clean. TOOH.
9. Inspect the mill on the surface. If extreme wear is evident, consideration should be given to repeating the above step.

HORIZONTAL PRODUCTION HOLE:

1. Rig up Scientific Drilling Company. Adjust plan to target as necessary. Trip in the hole with Scientific Drilling's curve building assembly. This will be a 4-3/4" insert bit, 3-3/4" PDM, float sub/orienter combo, 2-flexible monel collars and 2-7/8" PH-6 drill pipe.
2. Build curve to estimated target depths and angles as follows:

True Vertical Depth	7265'
Measured Depth	7300'
Final Angle	74.0 degrees
Target Azimuth	333.5 degrees
Build Rate	59.92 degrees/100'

Drill the curve sliding as necessary to stay on target. It is recommended that after each slide, the bit be pulled back and washed through the slide. Once the curve is built, rotate through the curve section noting tight spots and fill. Make at least one short trip prior to tripping out of the hole.

3. Trip in the hole with Scientific Drilling's lateral assembly. This will be a 4-3/4" bit, 3-3/4" motor, float sub/orienter combo, 2 - flexible monel collars and 2-7/8" PH-6 drill pipe.
4. Drill +867' lateral. The end point will be +8168' MD, +7500' TVD and +738' vertical section per the attached Scientific well plan. Continue drilling the lateral per the Texaco Asset Team (Rick Ryan 915-688-2902 or Joe Villalobos 915-688-4876) recommendations.
5. Trip out of the hole with the drilling assembly.
6. TIH and run TDT log.

7. TIH and retrieve the whipstock.
8. Set a wireline set, tubing retrievable bridge plug for 5-1/2" casing at +7140' (Collars at 6981, 7024, 7070, 7114, 7159 and 7203'). Test plug to 1000 psi.
***Note: Perforated intervals that have been cement squeezed.**
9. Lay down the drill pipe.
10. Nipple down the BOP stack. Install a manual 3000 psig BOP equipped with blind rams and 3-1/2" pipe rams. Release the rig. Rig down and move out rotary tools.

COMPLETION PROCEDURE:

1. Back drag the location and set pulling unit anchors.
2. Move in and rig up a pulling unit.
3. Trip in the hole with a retrieving head on 3-1/2" tubing. Retrieve the plug. Trip out of the hole and lay down the plug.
4. Rig up Dowell. Acidize frac the horizontal lateral. The stimulation will be done down 3-1/2" tubing in the vertical portion with a packer set 100' above the window. Below the packer, the string will consist of 2-7/8" PH-6 tubing and ported subs
5. Flow back immediately. Flow/swab test for 12 hours. TOOH with frac string. TIH and retrieve RBP at 7193'. TIH with production string as per Hobbs OU recommendation.
6. Place on production.

POTENTIAL PROBLEMS

Horizontal Production hole:

- a) The horizontal lateral will be drilled with fresh water.
- b) H2S detection equipment is to be installed.
- c) Loss circulation material and/or other plugging agents are not to be used in this portion of the hole.

MUD PROGRAM

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Remarks</u>
Curve	Fresh Water	8.4 ppg	35	Raise visc. with starch and gel
Horizontal	Fresh Water	8.4-9.0 ppg	28-29	Circulate reserve

EVALUATION PROGRAM

Coring:

No cores are anticipated.

Mud Loggers:

A mud logger will be rigged from the start of the curve to total depth. Contact Joe Villalobos at (915) 688-4876 for the name of the mud logger.

Open Hole Logs:

The following open hole logs will be run in the vertical section of the well:

Run 1: Gyro from 6250' - surface for determination of bottom hole location
Scientific Drilling ran this May 24, 2000 and is attached.

The guidance system in the curve and horizontal sections of the hole will consist of a MWD system.

Horizontal Hole Logs:

TDT logs will be run in the lateral.

CASING PROPERTIES

KB - 3746', GL - 3728', PBTB 7740', TD - 7750'

	<u>DEPTH</u>	<u>BURST</u>		<u>COLLAPSE</u>		<u>TEST</u>
		<u>Rated (75%)</u>		<u>Rated (75%)</u>		<u>PRESSURE</u>
5-1/2", 15.5#, WC-50	0-4160'	4400	3300	3810	2857	1000
5-1/2", 17#, WC-70	4160-7740'	6800	5100	5780	4335	1000

Cemented: 1938 sacks 35/65 Poz H with 6% gel, 5% salt, 1/4# flocele at 12.4 ppg.

F/B 1812 sacks 50/50 Poz H with 2% gel, 5% salt, 1/4# flocele at 14.2 ppg

Monument Abo perforations (existing):

7436-7460	24
7464-7466	2
7492-7494	2
7512-7515	3
7518-7522	4
7530-7533	3
7539-7547	8
7578-7581	3
7636-7643	7
7651-7653	2
7672-7682	10

(2 jspf, 0.47" entry, 120 deg. Phasing, 68' net, 246' gross)

Abo perforations (squeezed with 160 sacks Class H w/ 2#/sack coalite, 0.2% D46, 0.2% D176, 0.2% D65, did not hold - tested to 500 psi, lost 260 psi in 30 minutes)

Resqueezed with 12 bbls SqueezeCRETE, 1170 psi squeeze - tested to 320 psi and held for 30 minutes):

6912-6918	6	
6940-6944	4	22' between set of perfs
6958-6970	12	14
7014-7016	2	44
7020-7022	2	4
7046-7050	4	24
7092-7094	2	42
7114-7118	4	20
7134-7140	6	16
7160-7164	4	20
7220-7224	4	56
7242-7250	8	18
7278-7282	4	28
7316-7318	2	34

(2 jspf, 0.47" entry, 120 deg. Phasing, 64' net, 406' gross)

Casing Collars: 6764, 6808, 6851, 6896, 6938, 6981, 7024, 7070, 7114, 7159, 7203, 7248, 7290, 7312 (short joint), 7355, 7392 and 7435'

CSA
6/8/00

*****;
: SCIENTIFIC DRILLING CONTROLS :
*****<

Directional Survey Report

for

ZDD?
3 TEXACO E & F 3
3 MIDLAND TEXAS 3
@DDDY

Well Number : NEW MEXICO "E" NCT-2 NO. 1
Well Location : LEA COUNTY, NEW MEXICO
Job Number : 32K0500178
Location Latitude : 32.643
Survey Date : 24-MAY-2000
S.D.C. Personnel : JON VALENZUELA
Length Units : Feet
North Reference : TRUE North
Grid Correction : 0.00 Degrees
Survey Depth Zero : KB
Proposal Direction :
Calculation Method : Minimum Curvature

Remarks : The INRUN Survey will be called definitive

#####;
 : SCIENTIFIC DRILLING CONTROLS :
 #####<

Inrun Survey
 for
 TEXACO E & P

Page 1

Well No.: NEW MEXICO "E" NCT-2 N

Date : 24-MAY-20

Job No. : 32K0500178

TRUE

Proposal : 0.00

Depth (Feet)	T.V.D. (Feet)	V.S. (Feet)	Inc Deg.	Azimuth Deg.	Latitude (Feet)	Departure (Feet)	D-leg /100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	100.00	-0.81	0.98	199.38	-0.81	-0.28	0.98
200.00	199.98	-2.42	0.96	196.55	-2.42	-0.81	0.05
300.00	299.97	-3.91	0.83	196.87	-3.91	-1.25	0.13
400.00	399.96	-5.30	0.83	197.10	-5.30	-1.68	0.00
500.00	499.95	-6.67	0.83	200.09	-6.67	-2.14	0.04
600.00	599.93	-8.07	0.96	210.25	-8.07	-2.81	0.20
700.00	699.92	-9.46	0.89	211.98	-9.46	-3.64	0.08
800.00	799.91	-10.78	0.91	213.31	-10.78	-4.49	0.03
900.00	899.90	-12.19	0.97	207.69	-12.19	-5.32	0.11
1000.00	999.88	-13.72	0.99	205.19	-13.72	-6.08	0.05
1100.00	1099.87	-15.28	1.02	208.95	-15.28	-6.88	0.07
1200.00	1199.86	-16.60	0.63	190.68	-16.60	-7.41	0.47
1300.00	1299.85	-17.79	0.74	183.43	-17.79	-7.55	0.14
1400.00	1399.84	-18.81	0.44	169.63	-18.81	-7.52	0.33
1500.00	1499.84	-19.33	0.25	130.14	-19.33	-7.29	0.29
1600.00	1599.84	-19.70	0.30	152.22	-19.70	-7.00	0.12
1700.00	1699.84	-20.07	0.23	131.59	-20.07	-6.73	0.12
1800.00	1799.84	-20.29	0.22	117.29	-20.29	-6.41	0.06
1900.00	1899.84	-20.40	0.21	97.80	-20.40	-6.05	0.07
2000.00	1999.84	-20.52	0.24	116.17	-20.52	-5.68	0.08
2100.00	2099.84	-20.58	0.32	84.72	-20.58	-5.22	0.17
2200.00	2199.83	-20.52	0.39	83.84	-20.52	-4.60	0.07
2300.00	2299.83	-20.36	0.57	75.51	-20.36	-3.78	0.19
2400.00	2399.82	-20.19	0.63	84.74	-20.19	-2.75	0.11
2500.00	2499.82	-20.23	0.83	97.85	-20.23	-1.49	0.26
2600.00	2599.80	-20.25	0.87	83.44	-20.25	-0.02	0.22
2700.00	2699.79	-20.28	0.93	98.61	-20.28	1.54	0.24
2800.00	2799.78	-20.60	0.90	104.59	-20.60	3.10	0.10
2900.00	2899.77	-21.21	0.84	124.25	-21.21	4.47	0.30
3000.00	2999.76	-22.25	0.75	164.24	-22.25	5.25	0.55
3100.00	3099.75	-23.52	0.74	169.09	-23.52	5.55	0.06
3200.00	3199.74	-24.78	0.73	168.65	-24.78	5.80	0.01
3300.00	3299.73	-26.08	0.81	163.08	-26.08	6.13	0.11
3400.00	3399.72	-27.53	0.94	160.64	-27.53	6.61	0.14
3500.00	3499.71	-29.13	1.02	158.29	-29.13	7.21	0.09
3600.00	3599.69	-30.91	1.16	159.86	-30.91	7.89	0.14
3700.00	3699.67	-32.83	1.19	159.14	-32.83	8.61	0.03
3800.00	3799.64	-34.80	1.23	159.63	-34.80	9.35	0.04
3900.00	3899.62	-36.80	1.24	161.00	-36.80	10.11	0.22

SCIENTIFIC DRILLING CONTROLS

Inrun Survey

for

TEXACO E & P

Page 2

Well No.: NEW MEXICO "E" NCT-2 N

Date : 24-MAY-20

Job No. : 32K0500178

TRUE

Proposal : 0.00

Depth (Feet)	T.V.D. (Feet)	V.S. (Feet)	Inc Deg.	Azimuth Deg.	Latitude (Feet)	Departure (Feet)	D-leg /100
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4000.00	3999.59	-39.43	1.49	161.63	-39.43	10.91	0.05
4100.00	4099.55	-41.83	1.41	160.78	-41.83	11.72	0.08
4200.00	4199.52	-44.16	1.41	162.85	-44.16	12.49	0.05
4300.00	4299.49	-46.57	1.48	162.77	-46.57	13.24	0.07
4400.00	4399.46	-49.07	1.49	166.71	-49.07	13.92	0.10
4500.00	4499.42	-51.68	1.56	169.50	-51.68	14.47	0.10
4600.00	4599.39	-54.27	1.48	166.80	-54.27	15.01	0.11
4700.00	4699.35	-56.78	1.45	170.37	-56.78	15.52	0.10
4800.00	4799.32	-59.32	1.49	175.12	-59.32	15.84	0.13
4900.00	4899.28	-62.12	1.72	180.09	-62.12	15.95	0.27
5000.00	4999.23	-65.42	2.07	178.06	-65.42	16.00	0.36
5100.00	5099.15	-69.23	2.30	179.54	-69.23	16.08	0.24
5200.00	5199.07	-73.25	2.30	179.03	-73.25	16.13	0.02
5300.00	5299.00	-77.09	2.11	175.72	-77.09	16.30	0.23
5400.00	5398.93	-80.63	2.00	168.42	-80.63	16.79	0.28
5500.00	5498.86	-84.31	2.40	159.91	-84.31	17.86	0.52
5600.00	5598.76	-88.55	2.79	159.32	-88.55	19.44	0.39
5700.00	5698.64	-93.17	2.84	160.75	-93.17	21.12	0.09
5800.00	5798.50	-98.01	3.07	158.95	-98.01	22.89	0.25
5900.00	5898.34	-103.50	3.53	166.94	-103.50	24.55	0.65
6000.00	5998.11	-110.12	4.15	178.61	-110.12	25.34	0.99
6100.00	6097.86	-117.17	3.93	179.45	-117.17	25.46	0.23
6200.00	6197.67	-123.39	3.22	175.77	-123.39	25.70	0.75
6300.00	6297.48	-129.47	3.79	172.99	-129.47	26.31	0.59
6400.00	6397.27	-135.97	3.69	179.69	-135.97	26.73	0.45
6500.00	6497.07	-142.20	3.49	188.81	-142.20	26.28	0.60
6600.00	6596.89	-148.21	3.46	184.45	-148.21	25.58	0.27
6700.00	6696.71	-154.17	3.39	183.59	-154.17	25.16	0.09
6800.00	6796.57	-159.43	2.75	196.31	-159.43	24.30	0.93
6900.00	6896.49	-163.20	1.69	180.80	-163.20	23.61	1.21
7000.00	6996.45	-166.07	1.71	158.57	-166.07	24.13	0.66
7100.00	7096.39	-169.35	2.17	178.21	-169.35	24.73	0.80
7200.00	7196.35	-172.41	1.36	189.54	-172.41	24.60	0.88
7300.00	7296.31	-175.01	1.67	191.97	-175.01	24.10	0.32
7400.00	7396.27	-177.75	1.55	192.00	-177.75	23.52	0.12
7500.00	7496.24	-180.14	1.37	207.77	-180.14	22.68	0.44
7600.00	7596.21	-182.31	1.32	194.13	-182.31	21.84	0.32
7700.00	7696.19	-184.02	0.68	178.33	-184.02	21.57	0.69
7716.00	7712.19	-184.16	0.29	176.08	-184.16	21.58	2.44

Scientific Drilling Inc.

Planning Report

Company: L98615-2-R
 Field: Monument Abo
 Site: Lea County, New Mexico
 Well: New Mexico "E" NCT-2 #1
 Wellpath: OH Original Hole
 Date: 06/09/2000
 Co-ordinate (N/E) Reference: SITE (DLS) above Mean Sea Level
 Vertical (V) Reference: SITE (DLS) above Mean Sea Level
 Section (S) Reference: SITE (DLS) above Mean Sea Level
 Plan: Plan #1

Field: Monument Abo
 Map System: US State Plane Coordinate System 1927
 Ellipsoid: Clarke - 1866
 Sys Datum: Mean Sea Level
 Map Zone: New Mexico, Eastern Zone
 North Reference: True
 Geomagnetic Model: Igrf2000

Site: Lea County, New Mexico
 Site Position: From: Geographic
 Position Uncertainty: 0.0 ft
 Water Depth: 0.0 ft
 Northing: 638537.98 ft
 Easting: 858696.82 ft
 Latitude: 32 45 0.00 N
 Longitude: 103 10 0.00 W
 Magnetic Declination: 8.68 deg
 Grid Convergence: 0.63 deg

Well: New Mexico "E" NCT-2 #1
 Well Position: +N/-S 0.0 ft
 From Slot: +E/-W 0.0 ft
 Position Uncertainty: 0.0 ft
 Northing: 638537.98 ft
 Easting: 858696.82 ft
 Latitude: 32 45 0.00 N
 Longitude: 103 10 0.00 W

Wellpath: OH Original hole
 Vertical Section: +N/-S 0.0 ft
 From: Site +E/-W 0.0 ft
 Measured Depth Reference: SITE
 Drilled From: Surface
 Tie-on Depth: ft
 V.Section Direction: 333.50 deg
 Above System Datum: Mean Sea Level

Plan: Plan #1
 Date Composed: 04/18/2000
 Version: 1
 Principal: Yes
 Locked: No

Plan Section Information

MD	Incl	Area	YS	N/S	E/W	YS	DLS	Build	Time	TOO
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg
7144.0	1.81	181.94	7140.4	-170.9	24.7	0.00	0.00	0.00	0.00	
7174.0	1.81	181.94	7170.4	-171.8	24.7	0.00	0.00	0.00	0.00	
7300.2	74.00	337.00	7265.0	-108.5	-3.3	59.92	57.19	122.84	155.26	
7305.9	74.28	336.97	7268.6	-103.4	-5.4	5.00	4.97	-0.61	-8.72	
8167.7	74.28	336.97	7500.0	680.0	-330.0	0.00	0.00	0.00	0.00	Toe NM e #1

Section 1: Start Hold

MD	Incl	Area	YS	N/S	E/W	YS	DLS	Build	Time	TOO
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg
7144.0	1.81	181.94	7140.4	-170.9	24.7	-164.0	0.00	0.00	0.00	0.00
7174.0	1.81	181.94	7170.4	-171.8	24.7	-164.8	0.00	0.00	0.00	0.00

Section 2: Start DLS 59.92 TFO 155.26

MD	Incl	Area	YS	N/S	E/W	YS	DLS	Build	Time	TOO
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg
7180.0	2.10	316.10	7176.4	-171.8	24.6	-164.8	59.92	4.84	2235.88	155.26
7185.0	5.01	328.56	7181.3	-171.8	24.4	-164.5	59.92	58.25	249.32	21.13
7190.0	7.98	331.82	7186.3	-171.1	24.2	-163.9	59.92	59.49	65.18	8.69
7195.0	10.97	333.32	7191.2	-170.4	23.8	-163.1	59.92	59.72	29.89	5.45
7200.0	13.96	334.18	7196.1	-169.4	23.3	-162.0	59.92	59.81	17.21	3.97
7205.0	16.95	334.74	7200.9	-168.2	22.7	-160.7	59.92	59.85	11.23	3.13
7210.0	19.95	335.13	7205.7	-166.8	22.1	-159.1	59.92	59.87	7.94	2.59
7215.0	22.94	335.43	7210.3	-165.1	21.3	-157.3	59.92	59.88	5.94	2.22
7220.0	25.93	335.66	7214.9	-163.2	20.5	-155.2	59.92	59.89	4.63	1.84
7225.0	28.93	335.85	7219.3	-161.1	19.5	-152.9	59.92	59.90	3.73	1.73
7230.0	31.92	336.00	7223.6	-158.8	18.5	-150.4	59.92	59.90	3.09	1.56
7235.0	34.92	336.13	7227.8	-156.3	17.4	-147.6	59.92	59.90	2.61	1.43
7240.0	37.91	336.25	7231.8	-153.6	16.2	-144.6	59.92	59.91	2.25	1.32
7245.0	40.91	336.34	7235.7	-150.7	14.9	-141.5	59.92	59.91	1.96	1.23
7250.0	43.90	336.43	7239.4	-147.6	13.5	-138.1	59.92	59.91	1.74	1.15

Scientific Drilling Inc.

Planning Report

Company: Federal E & P, Inc.	Date: 06/08/2000	Draw: 1001.01	Page: 2
Field: Marmon #300	Location: QTY 100000	Site: Las County, New Mexico, Inje North	
State: Las County, New Mexico	Version: (V.D) Release	Site: 00 above Mean Sea Level	
Well: A-100000-E-W-E-1-11	Section: (P.S) Release	Site: 0.00 (0.00) 200 Feet	
Wellbore: C-100000-NW	Plan: 100000	Plan #1	

Section 2: Start DLS 59.92 TFO 155.26

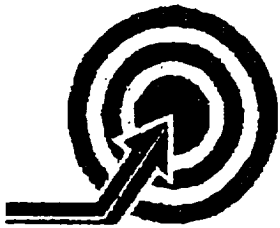
MD	Incl	Azim	TFO	N/S	E/W	VS	DLS	Ball	Turn	TFO
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg
7255.0	46.90	336.51	7242.9	-144.3	12.1	-134.6	59.92	59.91	1.56	1.09
7260.0	49.90	336.58	7246.2	-140.9	10.6	-130.8	59.92	59.91	1.41	1.03
7265.0	52.89	336.65	7249.3	-137.3	9.1	-126.9	59.92	59.91	1.29	0.99
7270.0	55.89	336.70	7252.3	-133.6	7.5	-122.9	59.92	59.91	1.20	0.95
7275.0	58.88	336.76	7254.9	-129.7	5.8	-118.7	59.92	59.91	1.11	0.91
7280.0	61.88	336.81	7257.4	-125.7	4.1	-114.3	59.92	59.91	1.05	0.88
7285.0	64.87	336.86	7259.7	-121.6	2.3	-109.9	59.92	59.91	0.99	0.86
7290.0	67.87	336.91	7261.7	-117.4	0.5	-105.3	59.92	59.91	0.94	0.83
7295.0	70.87	336.95	7263.4	-113.1	-1.3	-100.6	59.92	59.91	0.90	0.82
7300.2	74.00	337.00	7265.0	-108.5	-3.3	-95.6	59.92	59.92	0.87	0.80

Section 3: Start DLS 5.00 TFO -6.72

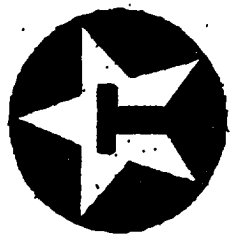
MD	Incl	Azim	TFO	N/S	E/W	VS	DLS	Ball	Turn	TFO
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg
7305.9	74.28	336.97	7266.6	-103.4	-5.4	-90.2	5.00	4.97	-0.61	-6.72

Section 4: Start Hold

MD	Incl	Azim	TFO	N/S	E/W	VS	DLS	Ball	Turn	TFO
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg
7400.0	74.28	336.97	7292.0	-20.1	-40.8	0.2	0.00	0.00	0.00	0.00
7500.0	74.28	336.97	7319.1	68.5	-78.5	98.3	0.00	0.00	0.00	0.00
7600.0	74.28	336.97	7346.2	157.1	-116.2	192.4	0.00	0.00	0.00	0.00
7700.0	74.28	336.97	7373.3	245.7	-153.8	288.5	0.00	0.00	0.00	0.00
7800.0	74.28	336.97	7400.4	334.2	-191.5	384.6	0.00	0.00	0.00	0.00
7900.0	74.28	336.97	7427.5	422.8	-229.2	480.7	0.00	0.00	0.00	0.00
8000.0	74.28	336.97	7454.6	511.4	-266.8	576.7	0.00	0.00	0.00	0.00
8100.0	74.28	336.97	7481.7	600.0	-304.5	672.8	0.00	0.00	0.00	0.00
8167.7	74.28	336.97	7500.0	660.0	-330.0	737.9	0.00	0.00	0.00	0.00



**Scientific
Drilling**



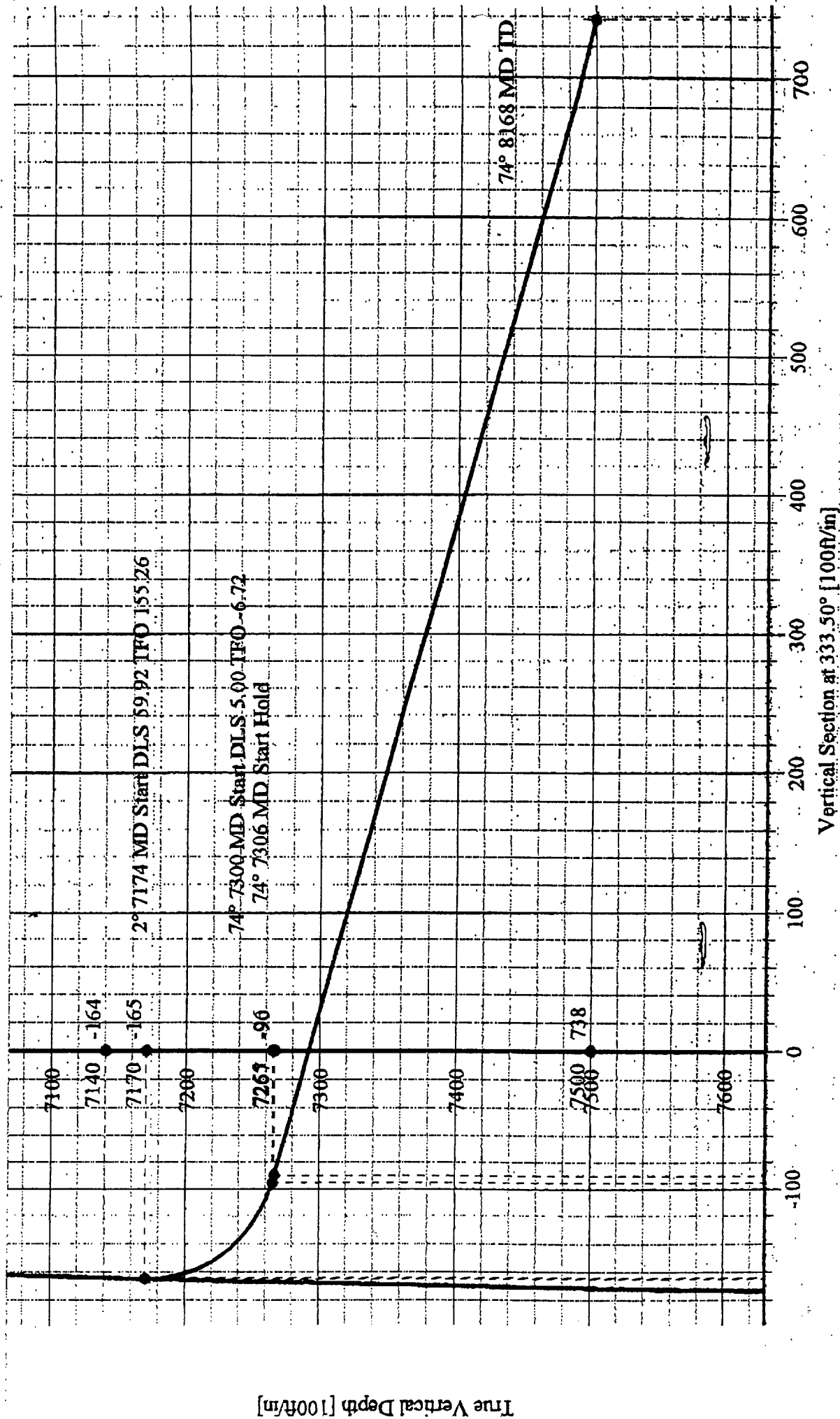
Texaco E & P, Inc.

Field: Monument Abo
Site: Lea County, New Mexico
Well: New Mexico "E" NCT-2 #1
Wellpath: OH Original hole
Plan: Plan #1

6884433 P.04

FROM SCIENTIFIC DRILLING INT'L TO

06-08-2000 09:13AM





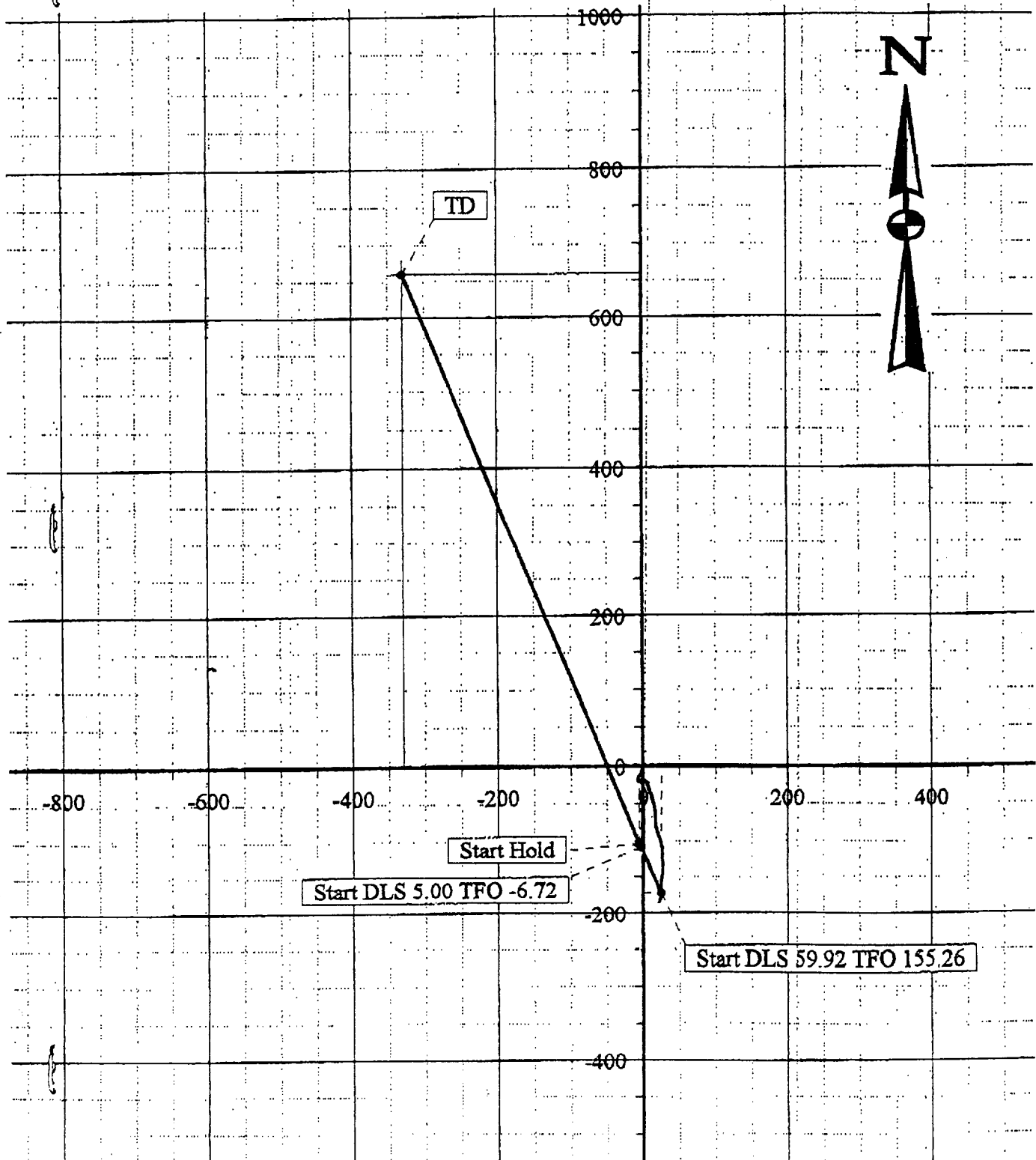
Scientific
Drilling

Texaco E & P, Inc.

Field: Monument Abo
Site: Lea County, New Mexico
Well: New Mexico "E" NCT-2 #1
Wellpath: OH Original hole
Plan: Plan #1



South(-)/North(+) [100ft/in]



West(-)/East(+) [100ft/in]

Scientific Drilling Inc.

Planning Report

REVISED PLAN
POST 05/24/00 GYRO.

Company: Texaco E & P, Inc.	Date: 05/28/2000	Time: 11:09:22	Page: 1
Field: Monument Abo	Co-ordinate(N/E) Reference:	Site: Lea County, New Mexico, True North	
Site: Lea County, New Mexico	Vertical (TVD) Reference:	SITE 0.0 above Mean Sea Level	
Well: New Mexico "E" NCT-2 #1	Section (VS) Reference:	Site (D.O.E, D.O.N, 333.5Az)	
Wellpath: OH Original hole	Plan:	Plan #1	

Field: Monument Abo

Map System: US State Plane Coordinate System 1927
Ellipsoid: Clarke - 1866
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
North Reference: True
Geomagnetic Model: igrf2000

Site: Lea County, New Mexico

Site Position:	From: Geographic	Northing: 638537.98 ft	Latitude: 32 45 0.000 N
Position Uncertainty: 0.0 ft		Easting: 858696.82 ft	Longitude: 103 10 0.000 W
Water Depth: 0.0 ft			Magnetic Declination: 8.88 deg
			Grid Convergence: 0.63 deg

Well: New Mexico "E" NCT-2 #1

Well Position: +N/-S 0.0 ft	Northing: 638537.98 ft	Latitude: 32 45 0.000 N
From Slot: +E/-W 0.0 ft	Easting: 858696.82 ft	Longitude: 103 10 0.000 W
Position Uncertainty: 0.0 ft		

Wellpath: OH Original hole

Drilled From: Surface
Tie-on Depth: ft
V.Section Direction: 333.50 deg
Above System Datum: Mean Sea Level

Vertical Section: +N/-S 0.0 ft
From: Site +E/-W 0.0 ft
Measured Depth Reference: SITE 0.0 ft

Plan: Plan #1

Date Composed: 04/18/2000
Version: 1

Principal: Yes

Locked: No

Plan Section Information

MD ft	Incl deg	Azimuth deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
7144.0	1.81	181.94	7140.4	-170.9	24.7	0.00	0.00	0.00	0.00	
7148.0	1.81	181.94	7144.4	-171.0	24.7	0.00	0.00	0.00	0.00	
7308.9	74.00	337.00	7265.0	-90.3	-10.9	47.01	44.87	96.37	155.26	
7310.7	73.92	336.96	7265.5	-88.7	-11.6	5.00	-4.48	-2.31	-153.61	
8157.4	73.92	336.96	7500.0	660.0	-330.0	0.00	0.00	0.00	0.00	Toe NM e #1

Section 1 : Start Hold.

MD ft	Incl deg	Azimuth deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
7144.0	1.81	181.94	7140.4	-170.9	24.7	-164.0	0.00	0.00	0.00	0.00
7148.0	1.81	181.94	7144.4	-171.0	24.7	-164.1	0.00	0.00	0.00	0.00

Section 2 : Start DLS 47.01 TFO 155.26

MD ft	Incl deg	Azimuth deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
7150.0	1.03	204.40	7146.4	-171.0	24.7	-164.1	47.01	-38.79	1122.98	155.26
7160.0	4.07	326.54	7156.4	-170.8	24.5	-163.8	47.01	30.42	1221.38	132.81
7170.0	8.74	332.29	7166.3	-169.9	23.9	-162.7	47.01	46.63	57.52	10.70
7180.0	13.42	334.05	7176.1	-168.1	23.1	-160.8	47.01	46.90	17.57	4.98
7190.0	18.12	334.91	7185.7	-165.7	21.9	-158.1	47.01	46.96	8.58	3.26
7200.0	22.82	335.42	7195.1	-162.5	20.4	-154.6	47.01	46.98	5.13	2.43
7210.0	27.52	335.77	7204.1	-158.6	18.7	-150.3	47.01	46.99	3.46	1.95
7220.0	32.22	336.02	7212.8	-154.1	16.7	-145.3	47.01	47.00	2.51	1.64
7230.0	36.92	336.21	7221.0	-148.9	14.4	-139.7	47.01	47.00	1.93	1.42
7240.0	41.62	336.37	7228.8	-143.1	11.8	-133.4	47.01	47.00	1.55	1.26
7250.0	46.32	336.50	7236.0	-136.8	9.0	-126.4	47.01	47.00	1.29	1.14
7260.0	51.02	336.61	7242.6	-129.9	6.1	-118.9	47.01	47.00	1.10	1.04
7270.0	55.72	336.70	7248.5	-122.5	2.9	-110.9	47.01	47.01	0.96	0.97
7280.0	60.42	336.79	7253.8	-114.7	-0.5	-102.5	47.01	47.01	0.86	0.91
7290.0	65.12	336.87	7258.4	-106.5	-4.0	-93.6	47.01	47.01	0.78	0.87

Scientific Drilling Inc.

Planning Report

Company: Texaco E & P, Inc.	Date: 05/28/2000	Time: 11:09:22	Page: 2
Field: Monument Abo	Co-ordinate(N/E) Reference: Site: Lea County, New Mexico, True North		
Site: Lea County, New Mexico	Vertical (TVD) Reference: SITE 0.0 above Mean Sea Level		
Well: New Mexico "E" NCT-2 #1	Section (VS) Reference: Site (0.0E, 0.0N, 333.5Az)		
Wellpath: OH Original hole	Plan: Plan #1		

Section 2 : Start DLS 47.01 TFO 155.26

MD ft	Incl deg	Azlm deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
7300.0	69.82	336.94	7262.2	-98.0	-7.6	-84.4	47.01	47.01	0.73	0.83
7308.9	74.00	337.00	7265.0	-90.3	-10.9	-75.9	47.01	47.01	0.69	0.80

Section 3 : Start DLS 5.00 TFO -153.61

MD ft	Incl deg	Azlm deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
7310.7	73.92	336.96	7265.5	-88.7	-11.6	-74.2	5.00	-4.48	-2.31	-153.61

Section 4 : Start Hold

MD ft	Incl deg	Azlm deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
7400.0	73.92	336.96	7290.2	-9.7	-45.2	11.5	0.00	0.00	0.00	0.00
7500.0	73.92	336.96	7317.9	78.7	-82.8	107.4	0.00	0.00	0.00	0.00
7600.0	73.92	336.96	7345.6	167.1	-120.4	203.3	0.00	0.00	0.00	0.00
7700.0	73.92	336.96	7373.3	255.6	-158.0	299.2	0.00	0.00	0.00	0.00
7800.0	73.92	336.96	7401.0	344.0	-195.6	395.1	0.00	0.00	0.00	0.00
7900.0	73.92	336.96	7428.7	432.4	-233.2	491.0	0.00	0.00	0.00	0.00
8000.0	73.92	336.96	7456.4	520.8	-270.8	586.9	0.00	0.00	0.00	0.00
8100.0	73.92	336.96	7484.1	609.3	-308.4	682.9	0.00	0.00	0.00	0.00
8157.4	73.92	336.96	7500.0	660.0	-330.0	737.9	0.00	0.00	0.00	0.00

BHL 2310' FSL & 1650' FWL
SEC 23-T19S-R36E