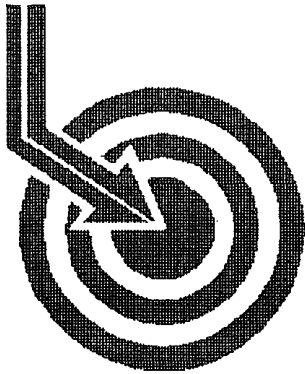




Scientific Drilling

RANGE RESOURCES

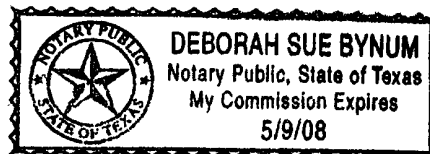
Field: Amoco
Site: Eddy County, NM
Well: Amoco 11 Fed #9
Wellpath: DH - Job #32D0605429/451
Survey: 06/15/05-06/23/05 & 06/25/05

This survey is correct to the best of my knowledge
and is supported by actual field data.

.....*Scott Reedy*.....Company Representative

Notorized this date 18th of July, 2005.

Deborah Sue Bynum
Notary Signature
County of Midland
State of Texas





Scientific Drilling Survey

RECEIVED

AUG 25 2005

OOD-ARTEDIA

Company: Range Resources	Date: 2005-06-30	Time: 11:31:45	Page: 1
Field: Amoco	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	GL 3045.0	
Well: Amoco 11 Fed #9	Section (VS) Reference:	Well (0.00N,0.00E,270.47Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Field: Amoco

Map System: US State Plane Coordinate System 1927
Geo Datum: NAD27 (Clarke 1866)
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
Coordinate System: Site Centre
Geomagnetic Model: lgr2005

Site: Eddy County, NM

Site Position:	Northing: 482547.40 ft	Latitude: 32 19 34.783 N
From: Map	Easting: 586449.50 ft	Longitude: 104 3 12.470 W
Position Uncertainty:		North Reference: Grid
Ground Level: 0.00 ft		Grid Convergence: 0.15 deg

Well: Amoco 11 Fed #9

Slot Name:

Well Position:	+N/-S 0.00 ft	Northing: 482547.40 ft	Latitude: 32 19 34.783 N
	+E/-W 0.00 ft	Easting: 586449.50 ft	Longitude: 104 3 12.470 W
Position Uncertainty:	0.00 ft		

Wellpath: 1

Current Datum: GL	Height 3045.00 ft	Drilled From: Surface	Tie-on Depth: 0.00 ft
Magnetic Data: 2004-11-04		Above System Datum: Mean Sea Level	
Field Strength: 49320 nT		Declination: 8.58 deg	
Vertical Section: Depth From (TVD)	+N/-S	Mag Dip Angle: 60.35 deg	
ft	ft	+E/-W	Direction deg
0.00	0.00	0.00	270.47

Survey Program for Definitive Wellpath

Date: 2005-06-30 Validated: No
Actual From To Survey

Version: 0
Toolcode

Tool Name

500.00	5851.00	MWD (500.00-5851.00)	MWD	MWD - Standard ISWWSA
5900.00	6475.00	Gyro (5900.00-6475.00)	Keeper	Keeper Standard Rate Gyro

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	ChA deg	ChD ft	Tool
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
500.00	0.34	98.00	500.00	-0.21	1.47	-1.47	0.07	0.07	0.00	98.00	1.48	MWD
578.00	0.18	98.64	578.00	-0.26	1.82	-1.82	0.21	-0.21	0.82	98.04	1.84	MWD
609.00	0.22	269.62	609.00	-0.26	1.81	-1.81	1.29	0.13	551.55	98.33	1.83	MWD
639.00	1.01	272.85	638.99	-0.25	1.49	-1.49	2.63	2.63	10.77	99.62	1.51	MWD
669.00	2.22	273.08	668.98	-0.21	0.64	-0.64	4.03	4.03	0.77	107.92	0.67	MWD
699.00	3.51	271.33	698.94	-0.16	-0.86	0.86	4.31	4.30	-5.83	259.73	0.87	MWD
728.00	4.53	268.03	727.87	-0.17	-2.89	2.89	3.61	3.52	-11.38	266.55	2.89	MWD
759.00	5.03	269.65	758.76	-0.22	-5.47	5.47	1.67	1.61	5.23	267.65	5.48	MWD
788.00	5.28	266.48	787.65	-0.31	-8.07	8.07	1.31	0.86	-10.93	267.77	8.08	MWD
818.00	5.79	267.07	817.51	-0.48	-10.96	10.96	1.71	1.70	1.97	267.51	10.97	MWD
847.00	6.29	267.45	846.35	-0.62	-14.01	14.01	1.73	1.72	1.31	267.46	14.02	MWD
879.00	6.67	267.54	878.14	-0.78	-17.62	17.61	1.19	1.19	0.28	267.47	17.64	MWD
911.00	7.43	268.36	909.90	-0.92	-21.54	21.54	2.40	2.37	2.56	267.56	21.56	MWD
943.00	7.81	268.56	941.62	-1.03	-25.79	25.78	1.19	1.19	0.62	267.71	25.81	MWD
974.00	7.99	272.40	972.32	-0.99	-30.04	30.03	1.80	0.58	12.39	268.10	30.06	MWD
1006.00	8.11	272.89	1004.01	-0.79	-34.52	34.51	0.43	0.37	1.53	268.69	34.53	MWD
1036.00	8.84	270.50	1033.68	-0.66	-38.94	38.93	2.70	2.43	-7.97	269.03	38.94	MWD
1131.00	8.85	269.38	1127.55	-0.68	-53.55	53.54	0.18	0.01	-1.18	269.28	53.55	MWD
1227.00	8.49	268.14	1222.45	-0.99	-68.01	68.00	0.42	-0.37	-1.29	269.17	68.02	MWD
1291.00	8.71	271.16	1285.73	-1.04	-77.58	77.57	0.78	0.34	4.72	269.23	77.59	MWD
1392.00	9.16	267.49	1385.51	-1.24	-93.26	93.24	0.72	0.45	-3.63	269.24	93.27	MWD



Scientific Drilling Survey

Company: Range Resources
Field: Amoco
Site: Eddy County, NM
Well: Amoco 11 Fed #9
Wellpath: 1

Date: 2005-06-30 Time: 11:31:45 Page: 2
Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: GL 3045.0
Section (VS) Reference: Well (0.00N,0.00E,270.47Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azlm deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	BuId deg/100ft	Turn deg/100ft	ClsA deg	ClsD ft	Tool
1488.00	9.27	268.59	1480.27	-1.76	-108.62	108.60	0.22	0.11	1.15	269.07	108.64	MWD
1584.00	9.06	269.62	1575.04	-2.00	-123.91	123.89	0.28	-0.22	1.07	269.07	123.93	MWD
1679.00	8.75	273.83	1668.90	-1.57	-138.60	138.58	0.76	-0.33	4.43	269.35	138.61	MWD
1774.00	9.01	276.04	1762.76	-0.31	-153.21	153.20	0.45	0.27	2.33	269.89	153.21	MWD
1868.00	7.93	274.64	1855.73	0.99	-166.99	166.99	1.17	-1.15	-1.49	270.34	166.99	MWD
1963.00	5.91	262.36	1950.04	0.87	-178.37	178.37	2.62	-2.13	-12.93	270.28	178.37	MWD
2058.00	5.50	265.48	2042.58	-0.11	-187.56	187.55	0.55	-0.44	3.35	269.97	187.56	MWD
2151.00	7.95	277.19	2136.93	0.35	-198.62	198.61	2.94	2.58	12.33	270.10	198.62	MWD
2247.00	12.70	269.97	2231.35	1.17	-215.77	215.77	5.12	4.95	-7.52	270.31	215.77	MWD
2343.00	12.41	267.20	2325.05	0.67	-236.62	236.62	0.70	-0.30	-2.89	270.16	236.62	MWD
2437.00	13.18	266.36	2416.72	-0.51	-257.41	257.39	0.84	0.82	-0.89	269.89	257.41	MWD
2533.00	11.81	271.67	2510.45	-0.92	-278.15	278.13	1.86	-1.43	5.53	269.81	278.15	MWD
2627.00	9.84	271.41	2602.77	-0.44	-295.80	295.78	2.10	-2.10	-0.28	269.91	295.80	MWD
2721.00	8.98	272.94	2695.50	0.14	-311.15	311.14	0.95	-0.91	1.63	270.02	311.15	MWD
2824.00	9.50	274.05	2797.17	1.15	-327.66	327.66	0.53	0.50	1.08	270.20	327.66	MWD
2919.00	9.97	271.17	2890.80	1.87	-343.70	343.71	0.71	0.49	-3.03	270.31	343.71	MWD
3016.00	9.97	272.30	2986.33	2.38	-360.49	360.50	0.20	0.00	1.16	270.38	360.50	MWD
3110.00	9.69	271.26	3078.95	2.88	-376.53	376.54	0.35	-0.30	-1.11	270.44	376.54	MWD
3206.00	9.76	271.18	3173.57	3.22	-392.74	392.75	0.07	0.07	-0.08	270.47	392.75	MWD
3301.00	9.36	271.19	3267.25	3.55	-408.52	408.53	0.42	-0.42	0.01	270.50	408.53	MWD
3397.00	9.42	271.13	3361.97	3.87	-424.17	424.19	0.06	0.06	-0.06	270.52	424.19	MWD
3492.00	8.91	271.38	3455.75	4.20	-439.30	439.32	0.54	-0.54	0.26	270.55	439.32	MWD
3588.00	8.49	270.65	3550.65	4.46	-453.82	453.84	0.45	-0.44	-0.76	270.56	453.84	MWD
3684.00	8.09	272.26	3645.65	4.80	-467.66	467.68	0.48	-0.42	1.68	270.59	467.68	MWD
3780.00	7.71	271.57	3740.74	5.25	-480.84	480.87	0.41	-0.40	-0.72	270.63	480.87	MWD
3876.00	8.31	271.84	3835.80	5.65	-494.21	494.24	0.63	0.62	0.28	270.65	494.25	MWD
3971.00	9.16	272.28	3929.70	6.17	-508.63	508.67	0.90	0.89	0.46	270.69	508.67	MWD
4067.00	9.04	272.06	4024.49	6.74	-523.80	523.84	0.13	-0.12	-0.23	270.74	523.85	MWD
4163.00	8.71	271.75	4119.34	7.23	-538.61	538.65	0.35	-0.34	-0.32	270.77	538.66	MWD
4259.00	8.29	270.43	4214.28	7.51	-552.79	552.84	0.48	-0.44	-1.37	270.78	552.84	MWD
4385.00	7.94	269.81	4339.02	7.55	-570.58	570.62	0.29	-0.28	-0.49	270.76	570.63	MWD
4481.00	8.75	268.94	4434.00	7.39	-584.51	584.55	0.85	0.84	-0.91	270.72	584.56	MWD
4577.00	8.69	267.11	4528.90	6.89	-599.05	599.09	0.30	-0.06	-1.81	270.66	599.09	MWD
4672.00	8.70	265.19	4622.80	5.93	-613.38	613.41	0.31	0.01	-2.02	270.55	613.41	MWD
4768.00	8.76	264.40	4717.69	4.60	-627.89	627.91	0.14	0.06	-0.82	270.42	627.91	MWD
4863.00	8.96	268.31	4811.56	3.68	-642.49	642.49	0.67	0.21	4.12	270.33	642.50	MWD
4959.00	8.39	267.93	4906.46	3.21	-656.96	656.96	0.60	-0.59	-0.40	270.28	656.97	MWD
5055.00	8.14	267.12	5001.46	2.61	-670.74	670.74	0.29	-0.26	-0.84	270.22	670.75	MWD
5150.00	7.94	271.78	5095.53	2.48	-684.02	684.02	0.72	-0.21	4.91	270.21	684.02	MWD
5246.00	7.40	269.15	5190.67	2.59	-696.83	696.83	0.67	-0.56	-2.74	270.21	696.83	MWD
5342.00	7.62	272.08	5285.85	2.73	-709.37	709.37	0.46	0.23	3.05	270.22	709.38	MWD
5437.00	7.45	271.12	5380.03	3.08	-721.82	721.82	0.22	-0.18	-1.01	270.24	721.83	MWD
5533.00	7.38	268.34	5475.22	3.02	-734.21	734.21	0.38	-0.07	-2.90	270.24	734.22	MWD
5597.00	7.20	267.16	5538.71	2.71	-742.32	742.32	0.37	-0.28	-1.84	270.21	742.33	MWD
5692.00	6.84	266.44	5633.00	2.06	-753.92	753.91	0.39	-0.38	-0.76	270.16	753.92	MWD
5724.00	6.78	266.09	5664.77	1.81	-757.70	757.69	0.23	-0.19	-1.09	270.14	757.70	MWD
5788.00	6.98	264.04	5728.31	1.15	-765.34	765.32	0.49	0.31	-3.20	270.09	765.34	MWD
5851.00	7.02	265.24	5790.84	0.43	-772.98	772.96	0.24	0.06	1.90	270.03	772.98	MWD
5900.00	6.93	266.72	5839.48	0.02	-778.92	778.89	0.41	-0.18	3.02	270.00	778.92	Keeper
6000.00	6.60	267.42	5938.78	-0.59	-790.68	790.65	0.34	-0.33	0.70	269.96	790.68	Keeper
6100.00	6.26	263.62	6038.15	-1.45	-801.84	801.80	0.54	-0.34	-3.80	269.90	801.84	Keeper
6200.00	5.99	261.62	6137.58	-2.82	-812.42	812.37	0.34	-0.27	-2.00	269.80	812.43	Keeper
6300.00	5.61	257.44	6237.07	-4.64	-822.35	822.29	0.57	-0.38	-4.18	269.68	822.37	Keeper



Scientific Drilling Survey

Company: Range Resources
Field: Amoco
Site: Eddy County, NM
Well: Amoco 11 Fed #9
Wellpath: 1

Date: 2005-06-30 Time: 11:31:45 Page: 3
Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: GL 3045.0
Section (VS) Reference: Well (0.00N,0.00E,270.47Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

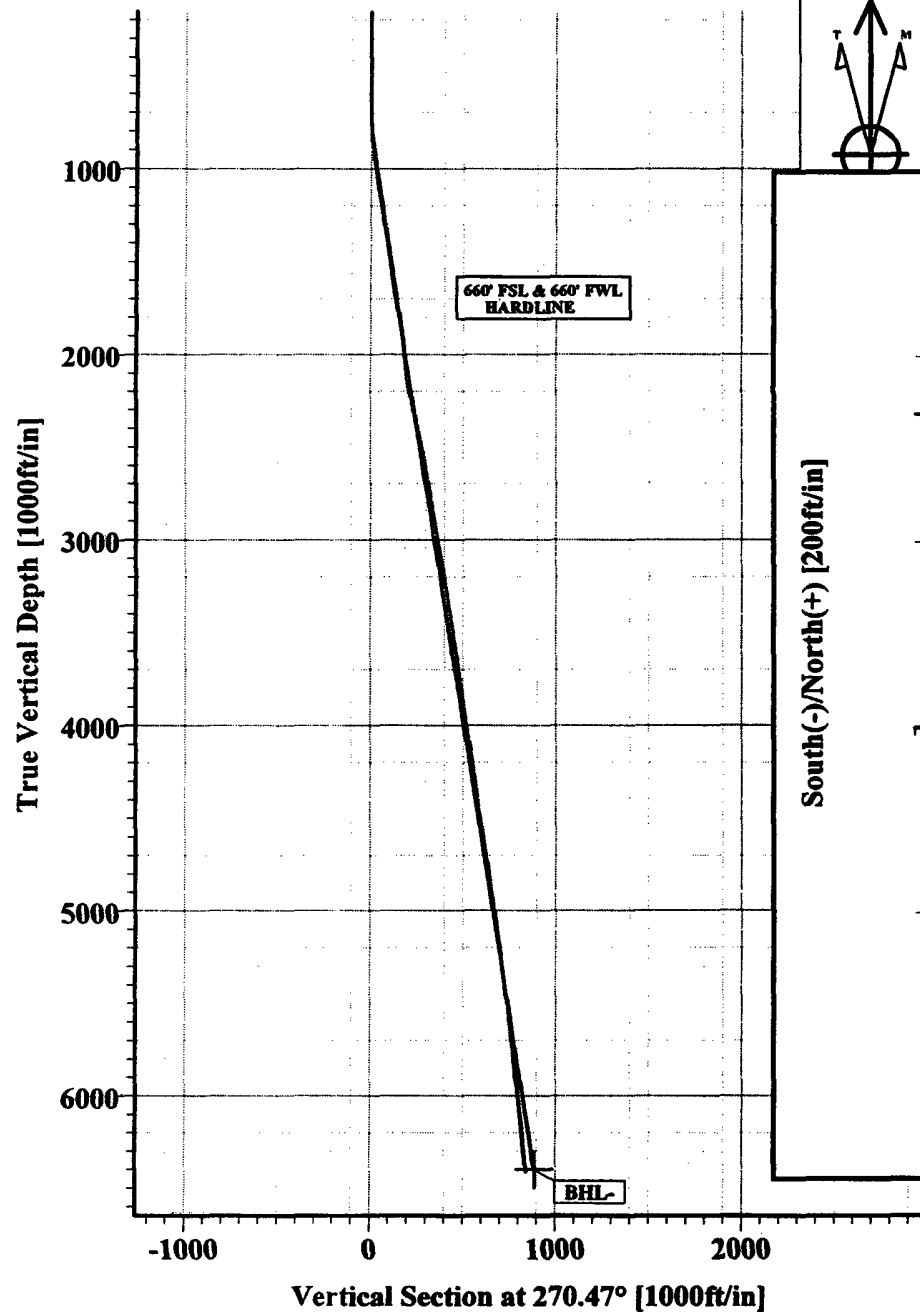
Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	ClsA deg	ClsD ft	Tool
6400.00	5.52	253.89	6336.60	-7.04	-831.75	831.66	0.36	-0.09	-3.55	269.52	831.78	Keeper
6475.00	5.38	250.59	6411.26	-9.21	-838.53	838.42	0.46	-0.19	-4.40	269.37	838.58	Keeper



Field: Amoco
Site: Eddy County, NM
Well: Amoco 11 Fed #9
Wellpath: 1
Plan: Plan #1

Range Resources



Azimuths to Grid North
True North: -0.15°
Magnetic North: 8.43°

Magnetic Field
Strength: 49328nT
Dip Angle: 68.35°
Date: 2004-11-04
Model: Igr2005

WELL DETAILS

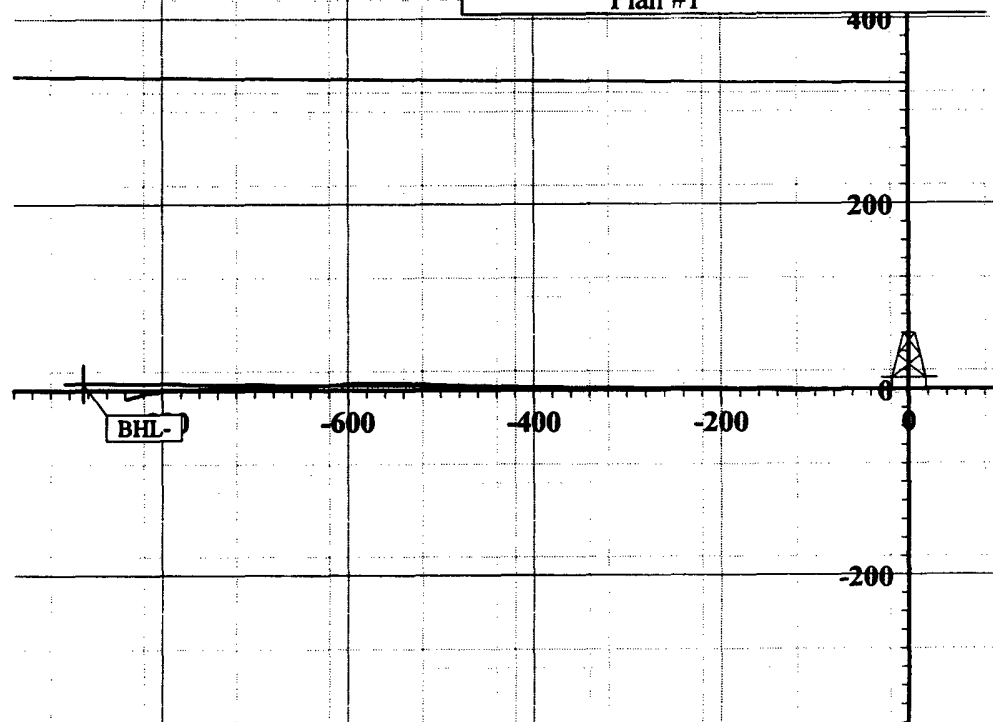
Name	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Stat
Amoco 11 Fed #9	0.00	0.00	482547.40	586449.50	32°19'34.783N	104°03'12.470W	N/A

TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
LL	0.00	0.00	0.00	482547.40	586449.50	32°19'34.783N	104°03'12.470W	Polygon
BHL	6400.00	7.30	-885.20	482554.70	585564.30	32°19'34.878N	104°03'22.786W	Point

LEGEND

- Amoco 11 Fed #9,1,Gyro
- Amoco 11 Fed #9,1,MWD
- 1
- Plan #1



Sec	MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	35.46	
3	1051.21	9.02	270.47	1049.34	0.29	-35.46	2.00	270.47	885.23	BHL
4	6468.92	9.02	270.47	6400.00	7.30	-885.20	0.00	0.00		

AMOCO 11 FED #9 SURVEY.TXT

Scientific Drilling
Survey

Company: Range Resources
Time: 11:33:41 Page: 1
Field: Amoco
Reference: Site: Eddy County, NM, Grid North
Site: Eddy County, NM
Reference: GL 3045.0
Well: Amoco 11 Fed #9
Reference: Well (0.00N,0.00E,270.47Azi)
Wellpath: 1
Method: Minimum Curvature Db: Sybase

Date: 2005-06-30
Co-ordinate(NE)
Vertical (TVD)
Section (VS)
Survey Calculation

Field: Amoco

Map System:US State Plane Coordinate System 1927
New Mexico, Eastern Zone
Geo Datum: NAD27 (Clarke 1866)
Site Centre
Sys Datum: Mean Sea Level
igrf2005

Map Zone:
Coordinate System:
Geomagnetic Model:

Site: Eddy County, NM

Site Position:
32 19 34.783 N
From: Map
104 3 12.470 W
Position Uncertainty: 0.00 ft
Grid
Ground Level: 0.00 ft
0.15 deg

Northing: 482547.40 ft
Easting: 586449.50 ft

Latitude:
Longitude:
North Reference:
Grid Convergence:

Well: Amoco 11 Fed #9

Slot Name:

Well Position: +N/-S 0.00 ft
32 19 34.783 N
+E/-W 0.00 ft
104 3 12.470 W
Position Uncertainty: 0.00 ft

Northing: 482547.40 ft
Easting : 586449.50 ft

Latitude:
Longitude:

Wellpath: 1
Surface

Drilled From:
Tie-on Depth:

0.00 ft
Current Datum: GL
Datum: Mean Sea Level
Magnetic Data: 2004-11-04
8.58 deg
Field Strength: 49320 nT
60.35 deg
Vertical Section:Depth From (TVD)
Direction
deg

Height 3045.00 ft

Above System
Declination:
Mag Dip Angle:
+N/-S
+E/-W
ft

AMOCO 11 FED #9 SURVEY.TXT

0.00

0.00

0.00

270.47

Survey Program for Definitive Wellpath

Date: 2005-06-30

Validated: No

Version: 0

Actual From To

Survey

Toolcode

Tool Name

ft

ft

500.00 5851.00

MWD (500.00-5851.00)

MWD

MWD - Standard ISCWSA

5900.00 6475.00

Gyro (5900.00-6475.00)

Keeper

Keeper Standard Rate Gyro

Build	Survey MD deg/100ft	Turn ft	Incl C/A deg	Azim deg	TVD C/S ft	Tool ft	N/S ft	E/W ft	VS ft	DLS
	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE	-0.21	1.47	-1.47	0.07
0.07	500.00	0.00	0.34	98.00	500.00	MWD	-0.26	1.82	-1.82	0.21
-0.21	578.00	0.82	0.18	98.04	578.00	MWD	-0.26	1.81	-1.81	1.29
0.13	609.00	0.22	0.22	269.62	609.00	MWD	-0.25	1.49	-1.49	2.63
2.63	551.55	10.77	0.98	272.85	551.55	MWD	-0.21	0.64	-0.64	4.03
	639.00		1.01	272.85	639.00	MWD	-0.16	-0.86	0.86	4.31
4.03	669.00	0.77	2.22	273.08	669.00	MWD	-0.17	-2.89	2.89	3.61
4.30	699.00	5.83	3.51	271.33	699.00	MWD	-0.22	-5.47	5.47	1.67
3.52	728.00	-11.38	4.53	268.03	728.00	MWD	-0.31	-8.07	8.07	1.31
1.61	759.00	5.23	5.03	269.65	759.00	MWD	-0.48	-10.96	10.96	1.71
0.86	788.00	-10.93	5.28	266.48	788.00	MWD	-0.62	-14.01	14.01	1.73
	818.00		5.79	267.07	818.00	MWD	-0.78	-17.62	17.62	1.19
1.70	847.00	1.97	6.29	267.45	847.00	MWD	-0.92	-21.54	21.54	2.40
1.72	879.00	1.31	6.67	267.54	879.00	MWD	-1.03	-25.79	25.78	1.19
1.19	911.00	0.28	7.43	268.36	911.00	MWD	-0.99	-30.04	30.03	1.80
2.37	943.00	2.56	7.81	268.56	943.00	MWD	-0.79	-34.52	34.51	0.43
1.19	974.00	0.62	7.99	272.40	974.00	MWD	-0.66	-38.94	38.93	2.70
0.58	1006.00	12.39	8.11	272.89	1006.00	MWD	-0.68	-53.55	53.54	0.18
0.37	1036.00	1.53	8.84	270.50	1036.00	MWD	-0.99	-68.01	68.00	0.42
2.43	1131.00	-7.97	8.85	269.38	1131.00	MWD				
0.01	1227.00	-1.18	8.49	268.14	1227.00	MWD				
-0.37		-1.29	269.17			MWD				

	1291.00	8.71	271.16	1285.73	-1.04	-77.58	77.57	0.78
0.34	4.72	269.23		77.59 MWD				
	1392.00	9.16	267.49	1385.51	-1.24	-93.26	93.24	0.72
0.45	-3.63	269.24		93.27 MWD				

Scientific Drilling Survey

Company: Range Resources
 Time: 11:33:41
 Field: Amoco
 Reference: Site: Eddy County, NM, Grid North
 Site: Eddy County, NM
 Reference: GL 3045.0
 Well: Amoco 11 Fed #9
 Reference: Well (0.00N,0.00E,270.47Azi)
 Wellpath: 1
 Method: Minimum Curvature Db: Sybase

Date: 2005-06-30
 Co-ordinate(NE)
 Vertical (TVD)
 Section (VS)
 Survey Calculation

Build	MD ft	Turn deg/100ft	Incl deg	Azim deg/100ft	TVD ft	N/S ft	E/W ft	VS ft	DLS
	1488.00		9.27	268.59	1480.27	-1.76	-108.62	108.60	0.22
0.11	1.15		269.07		108.64 MWD				
	1584.00		9.06	269.62	1575.04	-2.00	-123.91	123.89	0.28
-0.22	1.07		269.07		123.93 MWD				
	1679.00		8.75	273.83	1668.90	-1.57	-138.60	138.58	0.76
-0.33	4.43		269.35		138.61 MWD				
	1774.00		9.01	276.04	1762.76	-0.31	-153.21	153.20	0.45
0.27	2.33		269.89		153.21 MWD				
	1868.00		7.93	274.64	1855.73	0.99	-166.99	166.99	1.17
-1.15	-1.49		270.34		166.99 MWD				
	1963.00		5.91	262.36	1950.04	0.87	-178.37	178.37	2.62
-2.13	-12.93		270.28		178.37 MWD				
	2056.00		5.50	265.48	2042.58	-0.11	-187.56	187.55	0.55
-0.44	3.35		269.97		187.56 MWD				
	2151.00		7.95	277.19	2136.93	0.35	-198.62	198.61	2.94
2.58	12.33		270.10		198.62 MWD				
	2247.00		12.70	269.97	2231.35	1.17	-215.77	215.77	5.12
4.95	-7.52		270.31		215.77 MWD				
	2343.00		12.41	267.20	2325.05	0.67	-236.62	236.62	0.70
-0.30	-2.89		270.16		236.62 MWD				
	2437.00		13.18	266.36	2416.72	-0.51	-257.41	257.39	0.84
0.82	-0.89		269.89		257.41 MWD				
	2533.00		11.81	271.67	2510.45	-0.92	-278.15	278.13	1.86
-1.43	5.53		269.81		278.15 MWD				
	2627.00		9.84	271.41	2602.77	-0.44	-295.80	295.78	2.10

AMOCO 11 FED #9 SURVEY.TXT

-2.10	-0.28	269.91	295.80	MWD				
	2721.00	8.98	272.94	2695.50	0.14	-311.15	311.14	0.95
-0.91	1.63	270.02	311.15	MWD				
	2824.00	9.50	274.05	2797.17	1.15	-327.66	327.66	0.53
0.50	1.08	270.20	327.66	MWD				
	2919.00	9.97	271.17	2890.80	1.87	-343.70	343.71	0.71
0.49	-3.03	270.31	343.71	MWD				
	3016.00	9.97	272.30	2986.33	2.38	-360.49	360.50	0.20
0.00	1.16	270.38	360.50	MWD				
	3110.00	9.69	271.26	3078.95	2.88	-376.53	376.54	0.35
-0.30	-1.11	270.44	376.54	MWD				
	3206.00	9.76	271.18	3173.57	3.22	-392.74	392.75	0.07
0.07	-0.08	270.47	392.75	MWD				
	3301.00	9.36	271.19	3267.25	3.55	-408.52	408.53	0.42
-0.42	0.01	270.50	408.53	MWD				
	3397.00	9.42	271.13	3361.97	3.87	-424.17	424.19	0.06
0.06	-0.06	270.52	424.19	MWD				
	3492.00	8.91	271.38	3455.75	4.20	-439.30	439.32	0.54
-0.54	0.26	270.55	439.32	MWD				
	3588.00	8.49	270.65	3550.65	4.46	-453.82	453.84	0.45
-0.44	-0.76	270.56	453.84	MWD				
	3684.00	8.09	272.26	3645.65	4.80	-467.66	467.68	0.48
-0.42	1.68	270.59	467.68	MWD				
	3780.00	7.71	271.57	3740.74	5.25	-480.84	480.87	0.41
-0.40	-0.72	270.63	480.87	MWD				
	3876.00	8.31	271.84	3835.80	5.65	-494.21	494.24	0.63
0.62	0.28	270.65	494.25	MWD				
	3971.00	9.16	272.28	3929.70	6.17	-508.63	508.67	0.90
0.89	0.46	270.69	508.67	MWD				
	4067.00	9.04	272.06	4024.49	6.74	-523.80	523.84	0.13
-0.12	-0.23	270.74	523.85	MWD				
	4163.00	8.71	271.75	4119.34	7.23	-538.61	538.65	0.35
-0.34	-0.32	270.77	538.66	MWD				
	4259.00	8.29	270.43	4214.28	7.51	-552.79	552.84	0.48
-0.44	-1.37	270.78	552.84	MWD				
	4385.00	7.94	269.81	4339.02	7.55	-570.58	570.62	0.29
-0.28	-0.49	270.76	570.63	MWD				
	4481.00	8.75	268.94	4434.00	7.39	-584.51	584.55	0.85
0.84	-0.91	270.72	584.56	MWD				
	4577.00	8.69	267.11	4528.90	6.89	-599.05	599.09	0.30
-0.06	-1.91	270.66	599.09	MWD				
	4672.00	8.70	265.19	4622.80	5.93	-613.38	613.41	0.31
0.01	-2.02	270.55	613.41	MWD				
	4768.00	8.76	264.40	4717.69	4.60	-627.89	627.91	0.14
0.06	-0.82	270.42	627.91	MWD				
	4863.00	8.96	268.31	4811.56	3.68	-642.49	642.49	0.67
0.21	4.12	270.33	642.50	MWD				
	4959.00	8.39	267.93	4906.46	3.21	-656.96	656.96	0.60
-0.59	-0.40	270.28	656.97	MWD				
	5055.00	8.14	267.12	5001.46	2.61	-670.74	670.74	0.29
-0.26	-0.84	270.22	670.75	MWD				
	5150.00	7.94	271.78	5095.53	2.48	-684.02	684.02	0.72
-0.21	4.91	270.21	684.02	MWD				
	5246.00	7.40	269.15	5190.67	2.59	-696.83	696.83	0.67
-0.56	-2.74	270.21	696.83	MWD				
	5342.00	7.62	272.08	5285.85	2.73	-709.37	709.37	0.46

AMOCO 11 FED #9 SURVEY.TXT									
0.23	3.05	270.22	709.38	MWD					
	5437.00	7.45	271.12	5380.03	3.08	-721.82	721.82	0.22	
-0.18	-1.01	270.24	721.83	MWD					
	5533.00	7.38	268.34	5475.22	3.02	-734.21	734.21	0.38	
-0.07	-2.90	270.24	734.22	MWD					
	5597.00	7.20	267.16	5538.71	2.71	-742.32	742.32	0.37	
-0.28	-1.84	270.21	742.33	MWD					
	5692.00	6.84	266.44	5633.00	2.06	-753.92	753.91	0.39	
-0.38	-0.76	270.16	753.92	MWD					
	5724.00	6.78	266.09	5664.77	1.81	-757.70	757.69	0.23	
-0.19	-1.09	270.14	757.70	MWD					
	5788.00	6.98	264.04	5728.31	1.15	-765.34	765.32	0.49	
0.31	-3.20	270.09	765.34	MWD					
	5851.00	7.02	265.24	5790.84	0.43	-772.98	772.96	0.24	
0.06	1.90	270.03	772.98	MWD					
	5900.00	6.93	266.72	5839.48	0.02	-778.92	778.89	0.41	
-0.18	3.02	270.00	778.92	Keeper					
	6000.00	6.60	267.42	5938.78	-0.59	-790.68	790.65	0.34	
-0.33	0.70	269.96	790.68	Keeper					
	6100.00	6.26	263.62	6038.15	-1.45	-801.84	801.80	0.54	
-0.34	-3.80	269.90	801.84	Keeper					
	6200.00	5.99	261.62	6137.58	-2.82	-812.42	812.37	0.34	
-0.27	-2.00	269.80	812.43	Keeper					
	6300.00	5.61	257.44	6237.07	-4.64	-822.35	822.29	0.57	
-0.38	-4.18	269.68	822.37	Keeper					

Scientific Drilling Survey

Company: Range Resources
Time: 11:33:41
Field: Amoco
Reference: Site: Eddy County, NM, Grid North
Site: Eddy County, NM
Reference: GL 3045.0
Well: Amoco 11 Fed #9
Reference: Well (0.00N,0.00E,270.47Azi)
Wellpath: 1
Method: Minimum Curvature Db: Sybase

Date: 2005-06-30
Co-ordinate(NE)
Vertical (TVD)
Section (VS)
Survey Calculation

Survey									
Build	MD	Turn	Incl	Azim	TVD	N/S	E/W	VS	DLS
deg/100ft	ft	deg/100ft	deg	deg/100ft	ft	ft	ft	ft	
	6400.00		5.52	253.89	6336.60	-7.04	-831.75	831.66	0.36
-0.09	-3.55		269.52		831.78	Keeper			
	6475.00		5.38	250.59	6411.26	-9.21	-838.53	838.42	0.46
-0.19	-4.40		269.37		838.58	Keeper			

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