

Submit 3 Copies to Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-007-20688 SD-06-01
5. Indicate Type of Lease STATE ☐ FEE ☒
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name VPR D
8. Well Number 310
9. OGRID Number 180514
10. Pool name or Wildcat

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 **Horizontal Multi Lateral**

2. Name of Operator
EL Paso E & P Company, L.P.

3. Address of Operator
PO BOX 190, RATON, NM 87740

4. Well Location

Unit Letter **H** : **2413** feet from the **North** line and **101** feet from the **East** line
Section **2** Township **30N** Range **17E** NMPM Colfax County

1st Lateral Bottom Hole Location: Unit K, Sec 2, T 30N, R 17E, 1732' FNL, 2302' FWL, Colfax County

2nd Lateral Bottom Hole Location: Unit B, Sec 2, T 30N, R 17E, 524' FNL, 2333' FWL, Colfax County

3rd Lateral Bottom Hole Location: Unit A, Sec 2, T 30N, R 17E, 133' FNL, 946'1 FEL, Colfax County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
8,217' (GR)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. 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 ☐ MULTIPLE COMPL ☐
OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐
OTHER: **Horizontal Multi Lateral** ☒

1. 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. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion. Work proposed is as follows.
03/04/06 Spud well. Drill 12.25" hole to 340'. Run 9 5/8" casing to 330'. Mix and pump 135 sks Midcon II. Circulated 9 bbls cement to surface.
03/19/06 Ensign drilled 8 3/4" hole to 1,333'. Circulate and clean hole. Rig down for repairs.
03/25/06 Rig repaired. Drill 8 3/4" curve from 1,333' to 1,525'. Circulate and clean hole.
03/27/06 Mix and pump 160 Midcon II cement. POOH at 850'. WOC
03/28/06 TIH to 943'. Tag cement. Drill off cement to 1,056'. Drill curve with 8 3/4" PDC to 1,238'. Rig down for repairs.
03/30/06 Rig repaired. Drill curve from 1,238' to 1,989'. Circulate and clean hole.
04/01/06 Run 50 jts, 7" 23# Casing to 1,989'. Circulated and clean hole. HES pump 229 sks cement. Circulated 10 bbls cement to pit. WOC.
04/02/06 TIH with 6 1/2" bit. Tag cement at 1,960'. Drill out cement to 1,989'. Drill 6 1/8" lateral from 1,989'
04/08/06 to 4,272' MD. Cleaned out. Run 49 jts of 4.5" perf liner and 53 jts 11.3# perf liner. Top set at 1,984'. Bottom set at 4,272'.
04/10/06 PU packer tool. Set at 1,974'. Set whip stock and MWD tools. Top of window at 1,923' Bottom of window at 1,929'.
04/17/06 Drill 6 1/8" lateral hole from 1,936' to 3,857' MD. Run 50 jts 4.5" perforated liner. Top of liner set at 1,950'. Bottom at 3,857'.
04/18/06 PU packer tool. Set packer tool at 1,913'. Set whip stock at 1,897'. Top of window at 1,881'. Bottom of window at 1889'.
04/20/06 - 04/25/06 Drill 6 1/8" lateral hole from 1,960' to 4,443' MD. Run 66 jts 4.5" perf liner.
Top of liner set at 1,909'. Bottom set at 4,417'.
05/05/06 - 05/15/06 Fish out whip stock. Circulate and clean out.
05/17/06 TIH with 2 7/8" production tubing, 7/8" rods, and insert pump. Test and put well on production.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOC guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Shirley Mitchell TITLE Regulatory Analyst DATE 08/18/2006
Type or print name Shirley Mitchell E-mail address: shirley.mitchell@elpaso.com Telephone No. (505) 445-6785

For State Use Only

APPROVED BY: Ed Martin TITLE DISTRICT SUPERVISOR DATE 9-13-06
Conditions of Approval (if any): _____



Scientific Drilling Houston

Final Survey Report



Company: EL PASO PRODUCTION	Date: 4/18/2006	Time: 10:43:33	Page: 1
Field: VERMEJO FIELD, NEW MEXICO	Co-ordinate(NE) Reference:	Well: WELL D-310, Grid North	
Site: RATON (D310)	Vertical (TVD) Reference:	SITE 0.0	
Well: WELL D-310	Section (VS) Reference:	Well (0.00N,0.00E,311.51Azi)	
Wellpath: EXTENSION LATERAL	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Field: VERMEJO FIELD, NEW MEXICO

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: Well Centre
Geomagnetic Model: igrf2005

Site: RATON (D310)

Site Position:	Northing:	2134738.79 ft	Latitude:	36 51 51.400 N
From: Geographic	Easting:	276276.76 ft	Longitude:	105 5 53.200 W
Position Uncertainty:	0.0 ft		North Reference:	Grid
Ground Level:	8217.0 ft		Grid Convergence:	-0.46 deg

Well: WELL D-310

Slot Name:

Well Position:	+N/-S	0.0 ft	Northing:	2134738.79 ft	Latitude:	36 51 51.400 N
	+E/-W	0.0 ft	Easting:	276276.76 ft	Longitude:	105 5 53.200 W
Position Uncertainty:	0.0 ft					

Wellpath: EXTENSION LATERAL

Drilled From: PILOT HOLE
Tie-on Depth: 1969.0 ft
Above System Datum: Mean Sea Level
Declination: 9.35 deg
Mag Dip Angle: 64.21 deg
+E/-W Direction deg

Current Datum:	SITE	Height	0.0 ft
Magnetic Data:	3/9/2006		
Field Strength:	51751 nT		
Vertical Section:	Depth From (TVD)	+N/-S	ft
	ft		
	0.0	0.0	0.0

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	ClsD ft	ClsA deg	Tool
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.0	0.00	TIE LINE
331.0	0.00	0.00	331.0	0.0	0.0	0.0	0.00	0.0	0.00	SDI MWD
354.0	0.58	30.54	354.0	0.1	0.1	0.0	2.52	0.1	30.54	SDI MWD
672.0	0.60	15.32	672.0	3.1	1.3	1.1	0.05	3.4	23.07	SDI MWD
990.0	0.50	36.27	990.0	5.8	2.6	1.9	0.07	6.4	23.90	SDI MWD
1028.0	0.37	6.87	1028.0	6.1	2.7	2.0	0.67	6.6	23.90	SDI MWD
1060.0	1.55	309.44	1060.0	6.4	2.4	2.5	4.33	6.9	20.16	SDI MWD
1092.0	5.12	303.97	1091.9	7.5	0.8	4.3	11.19	7.6	6.44	SDI MWD
1124.0	9.38	305.24	1123.6	9.8	-2.5	8.4	13.32	10.1	345.91	SDI MWD
1155.0	13.85	304.96	1154.0	13.4	-7.6	14.6	14.42	15.4	330.55	SDI MWD
1187.0	18.30	309.42	1184.7	18.8	-14.6	23.4	14.42	23.8	322.17	SDI MWD
1219.0	21.77	304.59	1214.8	25.4	-23.4	34.3	12.00	34.5	317.35	SDI MWD
1251.0	25.30	304.78	1244.1	32.6	-33.9	47.0	11.03	47.0	313.93	SDI MWD
1282.0	28.92	307.47	1271.7	41.0	-45.3	61.1	12.33	61.1	312.15	SDI MWD
1314.0	32.46	309.53	1299.2	51.2	-58.0	77.4	11.54	77.4	311.39	SDI MWD
1346.0	35.56	311.99	1325.8	62.8	-71.6	95.2	10.60	95.3	311.28	SDI MWD
1378.0	38.54	313.79	1351.3	76.0	-85.7	114.5	9.91	114.5	311.56	SDI MWD
1410.0	41.87	315.42	1375.7	90.5	-100.4	135.1	10.91	135.1	312.03	SDI MWD
1442.0	45.01	316.75	1399.0	106.3	-115.6	157.1	10.22	157.1	312.60	SDI MWD
1473.0	46.58	317.01	1420.6	122.6	-130.8	179.2	5.10	179.3	313.13	SDI MWD
1505.0	47.81	317.13	1442.3	139.7	-146.8	202.6	3.85	202.7	313.59	SDI MWD
1537.0	51.08	317.92	1463.1	157.7	-163.2	226.7	10.39	227.0	314.01	SDI MWD
1568.0	53.51	318.38	1482.1	175.9	-179.6	251.1	7.93	251.4	314.41	SDI MWD
1600.0	56.99	319.09	1500.3	195.7	-196.9	277.2	11.03	277.6	314.82	SDI MWD
1632.0	60.58	319.63	1516.9	216.5	-214.7	304.3	11.31	304.9	315.23	SDI MWD
1664.0	63.99	319.54	1531.8	238.0	-233.1	332.3	10.66	333.2	315.60	SDI MWD
1696.0	67.56	318.84	1544.9	260.1	-252.2	361.2	11.33	362.3	315.89	SDI MWD
1728.0	71.09	318.17	1556.2	282.5	-272.0	391.0	11.20	392.2	316.09	SDI MWD



Scientific Drilling Houston

Final Survey Report



Company: EL PASO PRODUCTION
Field: VERMEJO FIELD, NEW MEXICO
Site: RATON (D310)
Well: WELL D-310
Wellpath: EXTENSION LATERAL

Date: 4/18/2006 Time: 10:43:33 Page: 2
Co-ordinate(NE) Reference: Well: WELL D-310, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,311.51Azi)
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	ClsD ft	ClsA deg	Tool
1760.0	74.47	317.75	1565.7	305.2	-292.5	421.3	10.64	422.7	316.22	SDI MWD
1791.0	77.62	316.92	1573.2	327.4	-312.9	451.2	10.49	452.8	316.30	SDI MWD
1823.0	80.96	316.40	1579.1	350.2	-334.4	482.6	10.56	484.3	316.32	SDI MWD
1855.0	84.48	315.83	1583.2	373.1	-356.4	514.2	11.14	516.0	316.31	SDI MWD
1886.0	86.17	316.84	1585.7	395.4	-377.8	545.0	6.35	546.9	316.31	SDI MWD
1918.0	86.78	315.98	1587.7	418.6	-399.8	576.8	3.29	578.8	316.31	SDI MWD
1969.0	88.49	317.71	1589.8	455.7	-434.7	627.5	4.77	629.8	316.36	CASING POINT
2012.0	89.93	319.17	1590.4	487.9	-463.2	670.2	4.77	672.8	316.49	SDI E-FIELD
2044.0	88.59	317.39	1590.8	511.8	-484.5	702.0	6.96	704.7	316.57	SDI E-FIELD
2076.0	89.19	315.40	1591.4	535.0	-506.5	733.9	6.49	736.7	316.56	SDI E-FIELD
2107.0	90.84	314.78	1591.4	556.9	-528.4	764.8	5.69	767.7	316.50	SDI E-FIELD
2139.0	91.61	314.34	1590.7	579.4	-551.2	796.7	2.77	799.7	316.43	SDI E-FIELD
2171.0	91.85	312.53	1589.7	601.4	-574.4	828.7	5.70	831.6	316.31	SDI E-FIELD
2201.0	92.15	310.69	1588.7	621.3	-596.9	858.7	6.21	861.5	316.15	SDI E-FIELD
2233.0	91.78	309.82	1587.6	641.9	-621.3	890.7	2.95	893.3	315.94	SDI E-FIELD
2264.0	90.34	309.33	1587.0	661.7	-645.1	921.6	4.91	924.1	315.72	SDI E-FIELD
2295.0	89.63	308.77	1587.0	681.2	-669.2	952.6	2.92	954.9	315.51	SDI E-FIELD
2327.0	89.93	308.37	1587.1	701.2	-694.2	984.6	1.56	986.7	315.28	SDI E-FIELD
2359.0	90.30	308.53	1587.1	721.1	-719.3	1016.5	1.26	1018.5	315.07	SDI E-FIELD
2390.0	90.10	309.74	1587.0	740.6	-743.3	1047.5	3.96	1049.3	314.89	SDI E-FIELD
2422.0	90.60	308.48	1586.8	760.8	-768.2	1079.5	4.24	1081.2	314.72	SDI E-FIELD
2454.0	91.28	308.29	1586.2	780.7	-793.3	1111.4	2.21	1113.0	314.54	SDI E-FIELD
2486.0	91.61	308.63	1585.4	800.6	-818.3	1143.4	1.48	1144.8	314.37	SDI E-FIELD
2517.0	91.04	307.69	1584.7	819.7	-842.7	1174.3	3.55	1175.6	314.21	SDI E-FIELD
2549.0	90.24	307.63	1584.4	839.3	-868.0	1206.2	2.51	1207.4	314.04	SDI E-FIELD
2581.0	89.19	307.66	1584.5	858.8	-893.3	1238.1	3.28	1239.2	313.87	SDI E-FIELD
2612.0	89.16	307.20	1585.0	877.7	-918.0	1269.1	1.49	1270.0	313.71	SDI E-FIELD
2644.0	89.70	307.43	1585.3	897.0	-943.4	1301.0	1.83	1301.8	313.56	SDI E-FIELD
2676.0	90.00	307.00	1585.4	916.4	-968.9	1332.9	1.64	1333.6	313.41	SDI E-FIELD
2708.0	90.97	307.18	1585.1	935.7	-994.4	1364.8	3.08	1365.4	313.26	SDI E-FIELD
2740.0	91.71	307.40	1584.4	955.1	-1019.9	1396.7	2.41	1397.2	313.12	SDI E-FIELD
2771.0	91.45	307.87	1583.5	974.0	-1044.4	1427.6	1.73	1428.1	313.00	SDI E-FIELD
2803.0	91.71	306.95	1582.6	993.4	-1069.8	1459.5	2.99	1459.9	312.88	SDI E-FIELD
2835.0	92.02	306.74	1581.6	1012.6	-1095.4	1491.4	1.17	1491.7	312.75	SDI E-FIELD
2866.0	92.05	305.85	1580.5	1031.0	-1120.4	1522.2	2.87	1522.5	312.62	SDI E-FIELD
2898.0	92.02	305.54	1579.3	1049.6	-1146.3	1554.1	0.97	1554.3	312.48	SDI E-FIELD
2929.0	91.38	304.80	1578.4	1067.5	-1171.7	1584.9	3.16	1585.0	312.34	SDI E-FIELD
2961.0	93.20	305.08	1577.1	1085.8	-1197.9	1616.6	5.75	1616.7	312.19	SDI E-FIELD
2993.0	94.07	305.29	1575.1	1104.2	-1224.0	1648.4	2.80	1648.4	312.05	SDI E-FIELD
3025.0	92.99	305.42	1573.1	1122.7	-1250.0	1680.1	3.40	1680.2	311.93	SDI E-FIELD
3057.0	93.23	305.45	1571.4	1141.2	-1276.1	1711.9	0.76	1711.9	311.81	SDI E-FIELD
3089.0	93.60	305.13	1569.5	1159.6	-1302.1	1743.6	1.53	1743.7	311.69	SDI E-FIELD
3120.0	92.22	305.02	1567.9	1177.4	-1327.5	1774.4	4.47	1774.4	311.57	SDI E-FIELD
3152.0	91.45	305.43	1566.9	1195.9	-1353.6	1806.2	2.73	1806.2	311.46	SDI E-FIELD
3183.0	91.14	305.36	1566.2	1213.8	-1378.9	1837.0	1.03	1837.0	311.36	SDI E-FIELD
3215.0	90.98	305.67	1565.6	1232.4	-1404.9	1868.8	1.09	1868.9	311.26	SDI E-FIELD
3247.0	90.60	306.36	1565.2	1251.2	-1430.8	1900.7	2.46	1900.7	311.17	SDI E-FIELD
3261.0	88.82	306.17	1565.2	1259.5	-1442.1	1914.6	12.79	1914.7	311.13	SDI E-FIELD
3279.0	87.98	305.81	1565.7	1270.1	-1456.6	1932.5	5.08	1932.6	311.09	SDI E-FIELD
3309.0	87.31	306.44	1567.0	1287.7	-1480.9	1962.4	3.06	1962.5	311.01	SDI E-FIELD
3341.0	88.49	306.85	1568.1	1306.8	-1506.5	1994.2	3.90	1994.3	310.94	SDI E-FIELD
3373.0	90.81	307.40	1568.3	1326.1	-1532.0	2026.1	7.45	2026.3	310.88	SDI E-FIELD



Scientific Drilling Houston

Final Survey Report



Company: EL PASO PRODUCTION
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Site: RATON (D310)
Well: WELL D-310
Wellpath: EXTENSION LATERAL

Date: 4/18/2006 Time: 10:43:33 Page: 3
Co-ordinate(NE) Reference: Well: WELL D-310, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,311.51Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

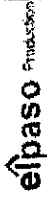
MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	BLS deg/100ft	ClsD ft	ClsA deg	Tool
3405.0	92.49	307.28	1567.4	1345.5	-1557.5	2058.0	5.26	2058.2	310.83	SDI E-FIELD
3437.0	92.12	307.19	1566.1	1364.9	-1582.9	2089.9	1.19	2090.1	310.77	SDI E-FIELD
3468.0	91.31	308.34	1565.2	1383.9	-1607.4	2120.9	4.54	2121.0	310.73	SDI E-FIELD
3500.0	91.98	308.50	1564.3	1403.7	-1632.5	2152.8	2.15	2153.0	310.69	SDI E-FIELD
3532.0	92.66	308.79	1563.0	1423.7	-1657.4	2184.7	2.31	2185.0	310.66	SDI E-FIELD
3564.0	92.66	308.95	1561.5	1443.8	-1682.3	2216.7	0.50	2216.9	310.64	SDI E-FIELD
3596.0	91.65	308.91	1560.3	1463.9	-1707.2	2248.6	3.16	2248.9	310.61	SDI E-FIELD
3627.0	91.11	309.14	1559.6	1483.4	-1731.3	2279.6	1.89	2279.9	310.59	SDI E-FIELD
3659.0	91.55	309.22	1558.8	1503.6	-1756.1	2311.5	1.40	2311.8	310.57	SDI E-FIELD
3690.0	91.78	310.55	1557.9	1523.5	-1779.9	2342.5	4.35	2342.8	310.56	SDI E-FIELD
3722.0	92.19	311.08	1556.8	1544.4	-1804.1	2374.5	2.09	2374.8	310.57	SDI E-FIELD
3754.0	90.94	311.32	1555.9	1565.4	-1828.1	2406.5	3.98	2406.8	310.57	SDI E-FIELD
3786.0	89.87	311.18	1555.7	1586.5	-1852.2	2438.5	3.37	2438.8	310.58	SDI E-FIELD
3818.0	90.40	311.25	1555.6	1607.6	-1876.3	2470.5	1.67	2470.8	310.59	SDI E-FIELD
3850.0	91.48	311.11	1555.1	1628.7	-1900.3	2502.5	3.40	2502.8	310.60	SDI E-FIELD
3882.0	90.50	311.19	1554.6	1649.7	-1924.4	2534.5	3.07	2534.8	310.61	SDI E-FIELD
3914.0	91.08	310.88	1554.1	1670.7	-1948.6	2566.4	2.06	2566.8	310.61	SDI E-FIELD
3945.0	91.51	310.77	1553.4	1691.0	-1972.0	2597.4	1.43	2597.8	310.61	SDI E-FIELD
3976.0	91.92	312.36	1552.5	1711.6	-1995.2	2628.4	5.29	2628.7	310.62	SDI E-FIELD
4008.0	92.72	312.69	1551.2	1733.2	-2018.8	2660.4	2.70	2660.7	310.65	SDI E-FIELD
4040.0	91.31	312.47	1550.1	1754.8	-2042.3	2692.4	4.46	2692.7	310.67	SDI E-FIELD
4072.0	89.50	311.81	1549.8	1776.3	-2066.0	2724.4	6.02	2724.6	310.69	SDI E-FIELD
4103.0	89.23	311.20	1550.2	1796.8	-2089.2	2755.4	2.15	2755.6	310.70	SDI E-FIELD
4135.0	90.50	311.16	1550.3	1817.9	-2113.3	2787.4	3.97	2787.6	310.70	SDI E-FIELD
4166.0	91.11	310.94	1549.8	1838.2	-2136.7	2818.4	2.09	2818.6	310.71	SDI E-FIELD
4198.0	91.11	311.11	1549.2	1859.3	-2160.8	2850.3	0.53	2850.6	310.71	SDI E-FIELD
4230.0	92.08	311.12	1548.3	1880.3	-2184.9	2882.3	3.03	2882.6	310.71	SDI E-FIELD
4272.0	92.08	311.12	1546.8	1907.9	-2216.6	2924.3	0.00	2924.6	310.72	PROJECTED DEPTH



Scientific Drilling

EL PASO PRODUCTION

RATON WELL D-310
VERMEJO FIELD, NEW MEXICO
ST00BP00 / EXTENSION LATERAL



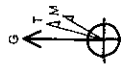
ALL DEPTHS SHOWN ARE
TRUE VERTICAL DEPTHS

4272.00' MD 92.08° INCLINATION 311.12° AZIMUTH 1546.80' TVD
1907.90' NORTH 2216.60' WEST of SURFACE LOCATION
2924.60' CLOSURE DISTANCE 310.72° CLOSURE AZIMUTH

1535
Plan #1 - revised

1547
WELL D-310

Azimuths to Grid North
True North: 0.46°
Magnetic North: 3.61°
Magnetic Field
Strength: 5.175 mT
Dip Angle: 65.81°
Date: 09/20/06
Notes: ipr2005



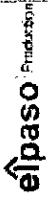
WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Spot
WELL D-310	0.0	0.0	2134738.79	276276.76	36°51'51.400N	105°05'53.200W	N/A

April 18, 2006
Scientific Drilling
281.443.4600

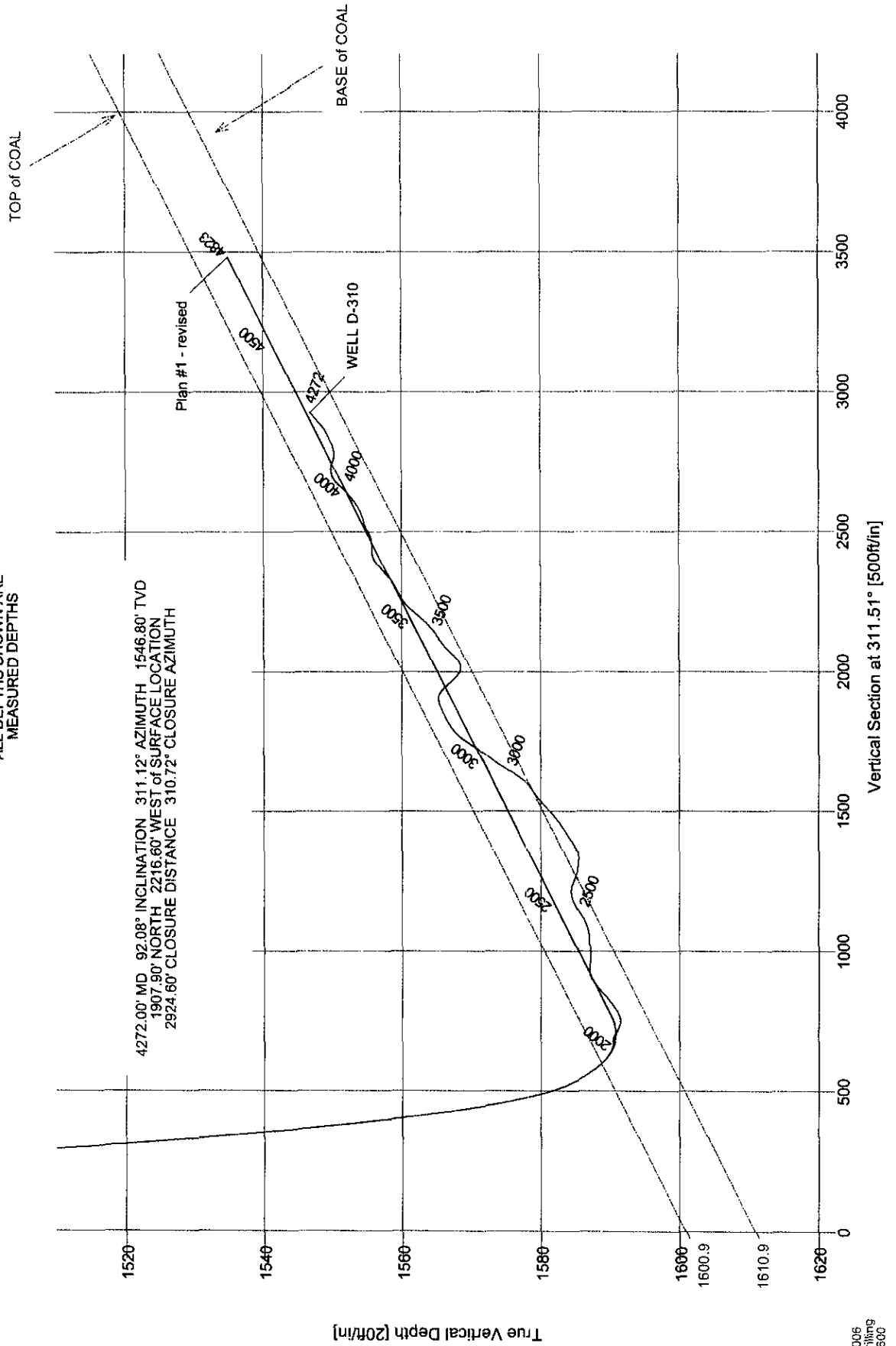
EL PASO PRODUCTION

RATON WELL D-310
VERMEJO FIELD, NEW MEXICO
ST00BP00 / EXTENSION LATERAL



ALL DEPTHS SHOWN ARE
MEASURED DEPTHS

4272.00' MD 92.08° INCLINATION 311.12° AZIMUTH 1546.80' TVD
1907.90' NORTH 2216.60' WEST OF SURFACE LOCATION
2924.60' CLOSURE DISTANCE 310.72° CLOSURE AZIMUTH





Scientific Drilling Houston

Final Survey Report



Company: EL PASO PRODUCTION Date: 4/25/2006 Time: 13:48:07 Page: 1
Field: VERMEJO FIELD, NEW MEXICO Co-ordinate(NE) Reference: Well: WELL D-310, Grid North
Site: RATON (D310) Vertical (TVD) Reference: SITE 0.0
Well: WELL D-310 Section (VS) Reference: Well (0.00N,0.00E,280.75Azi)
Wellpath: ST00BP00 / LEFT LATERAL Survey Calculation Method: Minimum Curvature Db: Sybase

Field: VERMEJO FIELD, NEW MEXICO

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: Well Centre
Geomagnetic Model: igrf2005

Site: RATON (D310)

Site Position: Northing: 2134738.79 ft Latitude: 36 51 51.400 N
From: Geographic Easting: 276276.76 ft Longitude: 105 5 53.200 W
Position Uncertainty: 0.0 ft North Reference: Grid
Ground Level: 8217.0 ft Grid Convergence: -0.46 deg

Well: WELL D-310

Slot Name:

Well Position: +N/-S 0.0 ft Northing: 2134738.79 ft Latitude: 36 51 51.400 N
+E/-W 0.0 ft Easting: 276276.76 ft Longitude: 105 5 53.200 W
Position Uncertainty: 0.0 ft

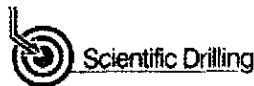
Wellpath: ST00BP00 / LEFT LATERAL

Drilled From: PILOT HOLE
Tie-on Depth: 1885.0 ft
Above System Datum: Mean Sea Level
Declination: 9.34 deg
Mag Dip Angle: 64.21 deg
+E/-W Direction deg

Current Datum: SITE Height 0.0 ft
Magnetic Data: 4/19/2006
Field Strength: 51739 nT
Vertical Section: Depth From (TVD) +N/-S
ft ft
0.0 0.0

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	ClsD ft	ClsA deg	Tool
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.0	0.00	TIE LINE
331.0	0.00	0.00	331.0	0.0	0.0	0.0	0.00	0.0	0.00	SDI MWD
354.0	0.58	30.54	354.0	0.1	0.1	0.0	2.52	0.1	30.54	SDI MWD
672.0	0.60	15.32	672.0	3.1	1.3	-0.7	0.05	3.4	23.07	SDI MWD
990.0	0.50	36.27	990.0	5.8	2.6	-1.4	0.07	6.4	23.90	SDI MWD
1028.0	0.37	6.87	1028.0	6.1	2.7	-1.5	0.67	6.6	23.90	SDI MWD
1060.0	1.55	309.44	1060.0	6.4	2.4	-1.1	4.33	6.9	20.16	SDI MWD
1092.0	5.12	303.97	1091.9	7.5	0.8	0.6	11.19	7.6	6.44	SDI MWD
1124.0	9.38	305.24	1123.6	9.8	-2.5	4.3	13.32	10.1	345.91	SDI MWD
1155.0	13.85	304.96	1154.0	13.4	-7.6	9.9	14.42	15.4	330.55	SDI MWD
1187.0	18.30	309.42	1184.7	18.8	-14.6	17.8	14.42	23.8	322.17	SDI MWD
1219.0	21.77	304.59	1214.8	25.4	-23.4	27.7	12.00	34.5	317.35	SDI MWD
1251.0	25.30	304.78	1244.1	32.6	-33.9	39.4	11.03	47.0	313.93	SDI MWD
1282.0	28.92	307.47	1271.7	41.0	-45.3	52.1	12.33	61.1	312.15	SDI MWD
1314.0	32.46	309.53	1299.2	51.2	-58.0	66.6	11.54	77.4	311.39	SDI MWD
1346.0	35.56	311.99	1325.8	62.8	-71.6	82.0	10.60	95.3	311.28	SDI MWD
1378.0	38.54	313.79	1351.3	76.0	-85.7	98.4	9.91	114.5	311.56	SDI MWD
1410.0	41.87	315.42	1375.7	90.5	-100.4	115.5	10.91	135.1	312.03	SDI MWD
1442.0	45.01	316.75	1399.0	106.3	-115.6	133.4	10.22	157.1	312.60	SDI MWD
1473.0	46.58	317.01	1420.6	122.6	-130.8	151.4	5.10	179.3	313.13	SDI MWD
1505.0	47.81	317.13	1442.3	139.7	-146.8	170.3	3.85	202.7	313.59	SDI MWD
1537.0	51.08	317.92	1463.1	157.7	-163.2	189.8	10.39	227.0	314.01	SDI MWD
1568.0	53.51	318.38	1482.1	175.9	-179.6	209.3	7.93	251.4	314.41	SDI MWD
1600.0	56.99	319.09	1500.3	195.7	-196.9	230.0	11.03	277.6	314.82	SDI MWD
1632.0	60.58	319.63	1516.9	216.5	-214.7	251.4	11.31	304.9	315.23	SDI MWD
1664.0	63.99	319.54	1531.8	238.0	-233.1	273.4	10.66	333.2	315.60	SDI MWD
1696.0	67.56	318.84	1544.9	260.1	-252.2	296.3	11.33	362.3	315.89	SDI MWD
1728.0	71.09	318.17	1556.2	282.5	-272.0	319.9	11.20	392.2	316.09	SDI MWD



Scientific Drilling Houston

Final Survey Report

el paso Production

Company: EL PASO PRODUCTION
Field: VERMEJO FIELD, NEW MEXICO
Site: RATON (D310)
Well: WELL D-310
Wellpath: ST00BP00 / LEFT LATERAL

Date: 4/25/2006 Time: 13:48:07 Page: 2
Co-ordinate(NE) Reference: Well: WELL D-310, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,280.75Azi)
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	ClsD ft	ClsA deg	Tool
1760.0	74.47	317.75	1565.7	305.2	-292.5	344.3	10.64	422.7	316.22	SDI MWD
1791.0	77.62	316.92	1573.2	327.4	-312.9	368.4	10.49	452.8	316.30	SDI MWD
1823.0	80.96	316.40	1579.1	350.2	-334.4	393.9	10.56	484.3	316.32	SDI MWD
1855.0	84.48	315.83	1583.2	373.1	-356.4	419.8	11.14	516.0	316.31	SDI MWD
1885.0	86.12	316.81	1585.6	394.7	-377.1	444.1	6.35	545.9	316.31	SDI MWD
1886.0	86.17	316.27	1585.7	395.4	-377.8	444.9	53.90	546.9	316.31	SDI E-FIELD
1940.0	91.78	315.00	1586.7	434.0	-415.5	489.2	10.65	600.9	316.25	SDI E-FIELD
1972.0	90.64	313.36	1586.0	456.3	-438.5	515.9	6.24	632.8	316.14	SDI E-FIELD
2002.0	88.55	311.48	1586.2	476.5	-460.6	541.4	9.37	662.8	315.97	SDI E-FIELD
2043.0	86.94	301.66	1587.8	500.9	-493.5	578.2	24.25	703.2	315.43	SDI E-FIELD
2106.0	88.86	297.27	1590.1	531.9	-548.3	637.8	7.60	763.9	314.13	SDI E-FIELD
2138.0	89.87	295.41	1590.5	546.1	-576.9	668.7	6.61	794.4	313.43	SDI E-FIELD
2170.0	90.13	293.22	1590.5	559.3	-606.1	699.8	6.89	824.7	312.70	SDI E-FIELD
2202.0	90.00	290.82	1590.4	571.3	-635.8	731.2	7.51	854.7	311.94	SDI E-FIELD
2234.0	90.13	288.01	1590.4	581.9	-665.9	762.8	8.79	884.4	311.15	SDI E-FIELD
2265.0	91.17	285.75	1590.0	590.9	-695.6	793.6	8.02	912.7	310.35	SDI E-FIELD
2297.0	91.14	283.85	1589.4	599.1	-726.5	825.5	5.94	941.7	309.51	SDI E-FIELD
2329.0	90.77	282.34	1588.9	606.3	-757.7	857.5	4.86	970.4	308.67	SDI E-FIELD
2359.0	90.07	279.59	1588.6	612.0	-787.1	887.5	9.46	997.1	307.87	SDI E-FIELD
2391.0	90.07	277.88	1588.6	616.9	-818.8	919.5	5.34	1025.1	307.00	SDI E-FIELD
2422.0	89.33	277.45	1588.8	621.0	-849.5	950.4	2.76	1052.3	306.17	SDI E-FIELD
2454.0	89.87	276.82	1589.0	625.0	-881.2	982.3	2.59	1080.4	305.34	SDI E-FIELD
2486.0	89.30	276.41	1589.2	628.7	-913.0	1014.3	2.19	1108.5	304.55	SDI E-FIELD
2518.0	89.23	275.98	1589.6	632.1	-944.8	1046.2	1.36	1136.8	303.78	SDI E-FIELD
2550.0	89.43	275.29	1590.0	635.3	-976.7	1078.0	2.24	1165.1	303.04	SDI E-FIELD
2581.0	90.57	275.08	1590.0	638.1	-1007.6	1108.9	3.74	1192.6	302.35	SDI E-FIELD
2613.0	89.90	274.98	1589.9	640.9	-1039.4	1140.7	2.12	1221.1	301.66	SDI E-FIELD
2645.0	90.77	274.97	1589.7	643.7	-1071.3	1172.6	2.72	1249.8	301.00	SDI E-FIELD
2676.0	91.17	275.34	1589.2	646.4	-1102.2	1203.4	1.76	1277.8	300.39	SDI E-FIELD
2708.0	91.58	275.51	1588.4	649.5	-1134.0	1235.3	1.39	1306.8	299.80	SDI E-FIELD
2739.0	90.60	275.15	1587.8	652.3	-1164.9	1266.1	3.37	1335.1	299.25	SDI E-FIELD
2771.0	91.04	275.00	1587.4	655.2	-1196.8	1298.0	1.45	1364.4	298.70	SDI E-FIELD
2802.0	90.50	275.27	1586.9	657.9	-1227.6	1328.8	1.95	1392.8	298.19	SDI E-FIELD
2834.0	89.80	275.23	1586.9	660.9	-1259.5	1360.7	2.19	1422.4	297.69	SDI E-FIELD
2866.0	89.80	275.07	1587.0	663.7	-1291.4	1392.5	0.50	1452.0	297.20	SDI E-FIELD
2897.0	90.23	275.38	1587.0	666.6	-1322.2	1423.4	1.71	1480.8	296.75	SDI E-FIELD
2928.0	90.70	275.85	1586.7	669.6	-1353.1	1454.2	2.14	1509.7	296.33	SDI E-FIELD
2960.0	90.50	276.09	1586.4	672.9	-1384.9	1486.1	0.98	1539.7	295.92	SDI E-FIELD
2992.0	90.30	276.62	1586.1	676.5	-1416.7	1518.0	1.77	1569.9	295.52	SDI E-FIELD
3024.0	90.00	276.19	1586.1	680.0	-1448.5	1549.9	1.64	1600.2	295.15	SDI E-FIELD
3055.0	90.70	276.16	1585.9	683.4	-1479.3	1580.8	2.26	1629.6	294.79	SDI E-FIELD
3087.0	91.11	276.62	1585.4	686.9	-1511.1	1612.7	1.93	1659.9	294.45	SDI E-FIELD
3119.0	91.84	276.59	1584.5	690.6	-1542.9	1644.6	2.28	1690.4	294.11	SDI E-FIELD
3151.0	92.45	275.66	1583.3	694.0	-1574.7	1676.5	3.47	1720.9	293.78	SDI E-FIELD
3182.0	92.52	275.01	1582.0	696.9	-1605.5	1707.3	2.11	1750.3	293.46	SDI E-FIELD
3214.0	91.31	274.06	1580.9	699.4	-1637.4	1739.1	4.81	1780.6	293.13	SDI E-FIELD
3246.0	90.07	272.22	1580.5	701.2	-1669.4	1770.9	6.93	1810.7	292.78	SDI E-FIELD
3277.0	90.34	271.80	1580.4	702.3	-1700.4	1801.5	1.61	1839.7	292.44	SDI E-FIELD
3309.0	90.40	271.80	1580.2	703.3	-1732.3	1833.1	0.19	1869.6	292.10	SDI E-FIELD
3341.0	90.34	271.92	1580.0	704.3	-1764.3	1864.7	0.42	1899.7	291.76	SDI E-FIELD
3373.0	90.54	271.86	1579.8	705.4	-1796.3	1896.3	0.65	1929.8	291.44	SDI E-FIELD
3405.0	89.73	271.66	1579.7	706.4	-1828.3	1927.9	2.61	1960.0	291.12	SDI E-FIELD



Scientific Drilling Houston

Final Survey Report



Company: EL PASO PRODUCTION
Field: VERMEJO FIELD, NEW MEXICO
Site: RATON (D310)
Well: WELL D-310
Wellpath: ST00BP00 / LEFT LATERAL

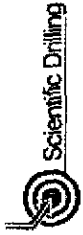
Date: 4/25/2006 Time: 13:48:07 Page: 3
Co-ordinate(NE) Reference: Well: WELL D-310, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,280.75Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	ClsD ft	ClsA deg	Tool
3437.0	87.55	271.00	1580.5	707.1	-1860.3	1959.5	7.12	1990.1	290.81	SDI E-FIELD
3469.0	86.11	270.70	1582.2	707.6	-1892.2	1991.0	4.60	2020.2	290.50	SDI E-FIELD
3500.0	86.55	270.43	1584.2	707.9	-1923.1	2021.4	1.66	2049.3	290.21	SDI E-FIELD
3532.0	87.69	270.81	1585.8	708.2	-1955.1	2052.9	3.75	2079.4	289.91	SDI E-FIELD
3564.0	87.95	270.81	1587.0	708.7	-1987.1	2084.4	0.81	2109.7	289.63	SDI E-FIELD
3596.0	88.46	271.22	1588.0	709.2	-2019.1	2115.9	2.04	2140.0	289.36	SDI E-FIELD
3628.0	89.93	270.68	1588.5	709.8	-2051.0	2147.4	4.89	2170.4	289.09	SDI E-FIELD
3659.0	90.47	271.74	1588.4	710.4	-2082.0	2178.0	3.84	2199.9	288.84	SDI E-FIELD
3691.0	89.97	271.73	1588.3	711.4	-2114.0	2209.6	1.56	2230.5	288.60	SDI E-FIELD
3723.0	89.73	271.42	1588.3	712.3	-2146.0	2241.2	1.23	2261.1	288.36	SDI E-FIELD
3755.0	90.10	270.73	1588.4	712.9	-2178.0	2272.7	2.45	2291.7	288.12	SDI E-FIELD
3787.0	92.08	272.11	1587.8	713.7	-2210.0	2304.3	7.54	2322.4	287.90	SDI E-FIELD
3819.0	91.64	272.51	1586.7	715.0	-2241.9	2336.0	1.86	2353.2	287.69	SDI E-FIELD
3850.0	92.21	271.74	1585.7	716.1	-2272.9	2366.6	3.09	2383.0	287.49	SDI E-FIELD
3882.0	92.01	270.84	1584.5	716.8	-2304.9	2398.1	2.88	2413.8	287.28	SDI E-FIELD
3913.0	90.77	270.05	1583.8	717.1	-2335.9	2428.6	4.74	2443.5	287.07	SDI E-FIELD
3945.0	91.34	269.57	1583.2	717.0	-2367.9	2460.0	2.33	2474.0	286.85	SDI E-FIELD
3976.0	90.77	269.50	1582.6	716.7	-2398.9	2490.4	1.85	2503.6	286.63	SDI E-FIELD
4008.0	91.34	269.70	1582.0	716.5	-2430.8	2521.8	1.89	2534.2	286.42	SDI E-FIELD
4040.0	90.54	269.39	1581.5	716.2	-2462.8	2553.2	2.68	2564.9	286.22	SDI E-FIELD
4072.0	90.44	269.27	1581.2	715.9	-2494.8	2584.6	0.49	2595.5	286.01	SDI E-FIELD
4104.0	90.87	269.02	1580.9	715.4	-2526.8	2615.9	1.55	2626.1	285.81	SDI E-FIELD
4135.0	91.51	269.36	1580.2	714.9	-2557.8	2646.3	2.34	2655.9	285.62	SDI E-FIELD
4167.0	90.10	269.65	1579.8	714.7	-2589.8	2677.7	4.50	2686.6	285.43	SDI E-FIELD
4199.0	90.64	269.00	1579.6	714.3	-2621.8	2709.0	2.64	2717.4	285.24	SDI E-FIELD
4231.0	91.78	268.82	1578.9	713.7	-2653.8	2740.3	3.61	2748.1	285.05	SDI E-FIELD
4263.0	91.04	268.52	1578.1	712.9	-2685.8	2771.6	2.50	2778.8	284.87	SDI E-FIELD
4294.0	90.03	268.00	1577.8	712.0	-2716.8	2801.9	3.66	2808.5	284.69	SDI E-FIELD
4326.0	89.90	267.37	1577.8	710.7	-2748.7	2833.1	2.01	2839.1	284.50	SDI E-FIELD
4358.0	91.81	267.03	1577.3	709.1	-2780.7	2864.2	6.06	2869.7	284.31	SDI E-FIELD
4389.0	91.91	267.31	1576.3	707.6	-2811.6	2894.3	0.96	2899.3	284.13	SDI E-FIELD
4413.0	93.12	266.99	1575.3	706.4	-2835.6	2917.6	5.21	2922.3	283.99	SDI E-FIELD
4443.0	93.12	266.99	1573.7	704.8	-2865.5	2946.7	0.00	2950.9	283.82	PROJECTED DEPTH

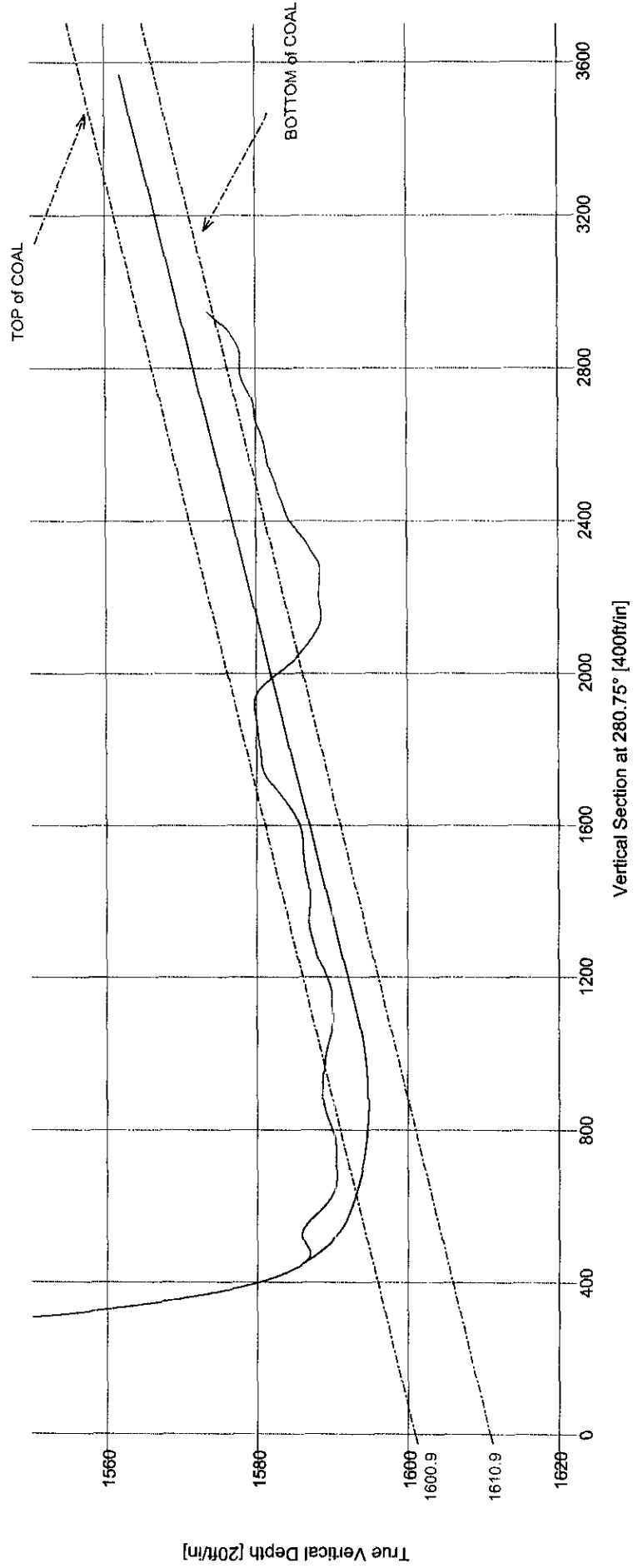
EL PASO PRODUCTION

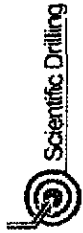
RATON WELL D-310
VERMEJO FIELD, NEW MEXICO
ST00BP00 / LEFT LATERAL



ALL DEPTHS SHOWN ARE
MEASURED DEPTHS

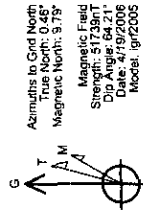
4443.00' MD 93.12° INCLINATION 266.99° AZIMUTH 1573.7' TVD
704.80' NORTH 2865.50' WEST OF SURFACE LOCATION
2950.90' CLOSURE DISTANCE 283.82° CLOSURE AZIMUTH





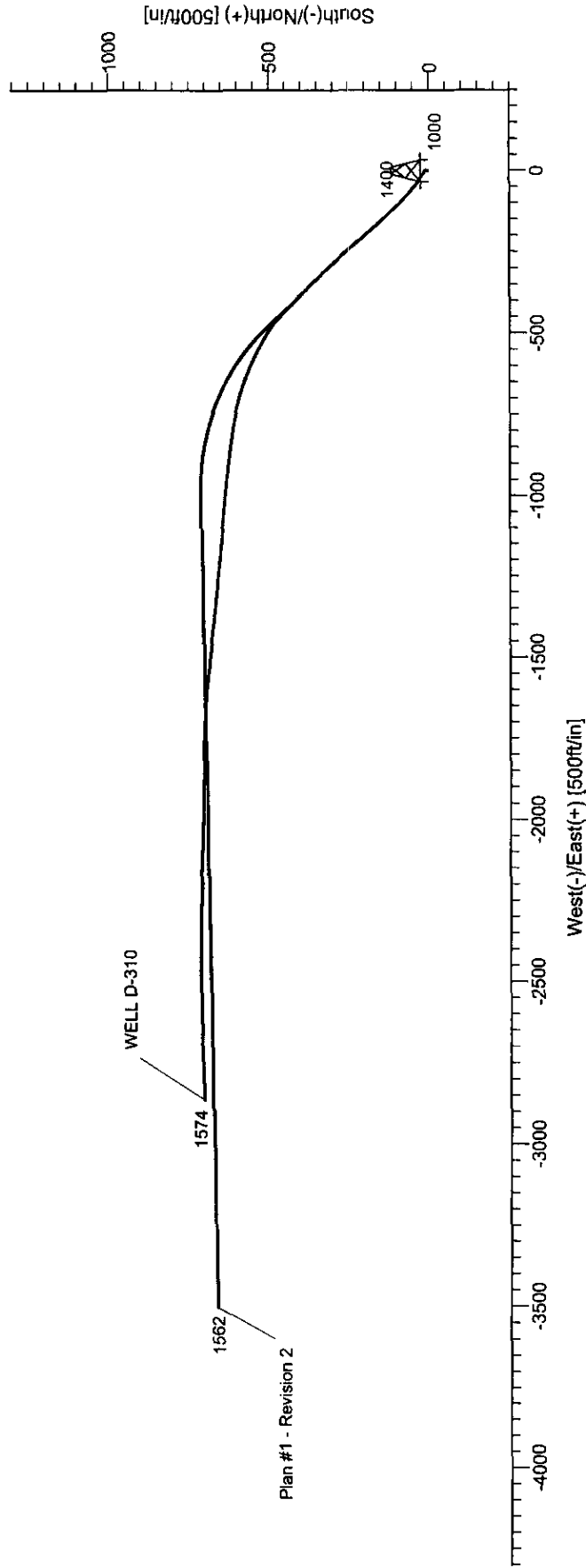
EL PASO PRODUCTION

RATON WELL D-310
VERMEJO FIELD, NEW MEXICO
ST00BP00 / LEFT LATERAL



ALL DEPTHS SHOWN ARE
TRUE VERTICAL DEPTHS

4443.00' MD 93.12° INCLINATION 266.99° AZIMUTH 1573.7' TVD
704.80' NORTH 2865.50' WEST OF SURFACE LOCATION
2950.90' CLOSURE DISTANCE 283.82° CLOSURE AZIMUTH



WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
WELL D-310	0.0	0.0	2134738.79	276276.76	36°51'51.400N	105°05'53.200W	N/A



Scientific Drilling Houston

Final Survey Report



Company: EL PASO PRODUCTION Date: 4/18/2006 Time: 12:54:37 Page: 1
Field: VERMEJO FIELD, NEW MEXICO Co-ordinate(NE) Reference: Well: WELL D-310, Grid North
Site: RATON (D310) Vertical (TVD) Reference: SITE 0.0
Well: WELL D-310 Section (VS) Reference: Well (0.00N,0.00E,340.64Azi)
Wellpath: RIGHT LATERAL Survey Calculation Method: Minimum Curvature Db: Sybase

Field: VERMEJO FIELD, NEW MEXICO

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: Well Centre
Geomagnetic Model: igrf2005

Site: RATON (D310)

Site Position: Northing: 2134738.79 ft Latitude: 36 51 51.400 N
From: Geographic Easting: 276276.76 ft Longitude: 105 5 53.200 W
Position Uncertainty: 0.0 ft North Reference: Grid
Ground Level: 8217.0 ft Grid Convergence: -0.46 deg

Well: WELL D-310

Slot Name:

Well Position: +N/-S 0.0 ft Northing: 2134738.79 ft Latitude: 36 51 51.400 N
+E/-W 0.0 ft Easting: 276276.76 ft Longitude: 105 5 53.200 W
Position Uncertainty: 0.0 ft

Wellpath: RIGHT LATERAL

Drilled From: PILOT HOLE
Tie-on Depth: 1949.0 ft
Above System Datum: Mean Sea Level
Declination: 9.35 deg
Mag Dip Angle: 64.21 deg

Current Datum: SITE Height 0.0 ft
Magnetic Data: 3/9/2006
Field Strength: 51751 nT
Vertical Section: Depth From (TVD) +N/-S
ft ft
0.0 0.0

+E/-W Direction
ft deg
0.0 340.64

Survey

MD ft	Incl deg	Azlm deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	ClsD ft	ClsA deg	Tool
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.0	0.00	TIE LINE
331.0	0.00	0.00	331.0	0.0	0.0	0.0	0.00	0.0	0.00	SDI MWD
354.0	0.58	30.54	354.0	0.1	0.1	0.1	2.52	0.1	30.54	SDI MWD
672.0	0.60	15.32	672.0	3.1	1.3	2.5	0.05	3.4	23.07	SDI MWD
990.0	0.50	36.27	990.0	5.8	2.6	4.6	0.07	6.4	23.90	SDI MWD
1028.0	0.37	6.87	1028.0	6.1	2.7	4.8	0.67	6.6	23.90	SDI MWD
1060.0	1.55	309.44	1060.0	6.4	2.4	5.3	4.33	6.9	20.16	SDI MWD
1092.0	5.12	303.97	1091.9	7.5	0.8	6.8	11.19	7.6	6.44	SDI MWD
1124.0	9.38	305.24	1123.6	9.8	-2.5	10.1	13.32	10.1	345.91	SDI MWD
1155.0	13.85	304.96	1154.0	13.4	-7.6	15.2	14.42	15.4	330.55	SDI MWD
1187.0	18.30	309.42	1184.7	18.8	-14.6	22.6	14.42	23.8	322.17	SDI MWD
1219.0	21.77	304.59	1214.8	25.4	-23.4	31.7	12.00	34.5	317.35	SDI MWD
1251.0	25.30	304.78	1244.1	32.6	-33.9	42.0	11.03	47.0	313.93	SDI MWD
1282.0	28.92	307.47	1271.7	41.0	-45.3	53.7	12.33	61.1	312.15	SDI MWD
1314.0	32.46	309.53	1299.2	51.2	-58.0	67.5	11.54	77.4	311.39	SDI MWD
1346.0	35.56	311.99	1325.8	62.8	-71.6	83.0	10.60	95.3	311.28	SDI MWD
1378.0	38.54	313.79	1351.3	76.0	-85.7	100.1	9.91	114.5	311.56	SDI MWD
1410.0	41.87	315.42	1375.7	90.5	-100.4	118.6	10.91	135.1	312.03	SDI MWD
1442.0	45.01	316.75	1399.0	106.3	-115.6	138.7	10.22	157.1	312.60	SDI MWD
1473.0	46.58	317.01	1420.6	122.6	-130.8	159.0	5.10	179.3	313.13	SDI MWD
1505.0	47.81	317.13	1442.3	139.7	-146.8	180.5	3.85	202.7	313.59	SDI MWD
1537.0	51.08	317.92	1463.1	157.7	-163.2	202.9	10.39	227.0	314.01	SDI MWD
1568.0	53.51	318.38	1482.1	175.9	-179.6	225.5	7.93	251.4	314.41	SDI MWD
1600.0	56.99	319.09	1500.3	195.7	-196.9	249.9	11.03	277.6	314.82	SDI MWD
1632.0	60.58	319.63	1516.9	216.5	-214.7	275.4	11.31	304.9	315.23	SDI MWD
1664.0	63.99	319.54	1531.8	238.0	-233.1	301.9	10.66	333.2	315.60	SDI MWD
1696.0	67.56	318.84	1544.9	260.1	-252.2	329.0	11.33	362.3	315.89	SDI MWD
1728.0	71.09	318.17	1556.2	282.5	-272.0	356.8	11.20	392.2	316.09	SDI MWD



Scientific Drilling Houston

Final Survey Report



Company: EL PASO PRODUCTION
Field: VERMEJO FIELD, NEW MEXICO
Site: RATON (D310)
Well: WELL D-310
Wellpath: RIGHT LATERAL

Date: 4/18/2006 Time: 12:54:37 Page: 2
Co-ordinate(N/E) Reference: Well: WELL D-310, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,340.64Azi)
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	ClsD ft	ClsA deg	Tool
1760.0	74.47	317.75	1565.7	305.2	-292.5	385.0	10.64	422.7	316.22	SDI MWD
1791.0	77.62	316.92	1573.2	327.4	-312.9	412.6	10.49	452.8	316.30	SDI MWD
1823.0	80.96	316.40	1579.1	350.2	-334.4	441.3	10.56	484.3	316.32	SDI MWD
1855.0	84.48	315.83	1583.2	373.1	-356.4	470.2	11.14	516.0	316.31	SDI MWD
1886.0	86.17	316.84	1585.7	395.4	-377.8	498.3	6.35	546.9	316.31	SDI MWD
1918.0	86.78	315.98	1587.7	418.6	-399.8	527.5	3.29	578.8	316.31	SDI MWD
1999.0	90.07	323.88	1589.9	480.5	-451.9	603.1	10.56	659.6	316.76	SDI E-FIELD
2031.0	90.91	327.73	1589.6	506.9	-469.9	634.1	12.31	691.2	317.17	SDI E-FIELD
2062.0	90.91	328.17	1589.1	533.2	-486.3	664.3	1.42	721.7	317.63	SDI E-FIELD
2094.0	92.49	330.38	1588.2	560.7	-502.6	695.7	8.49	753.0	318.13	SDI E-FIELD
2125.0	92.19	332.62	1586.9	587.9	-517.4	726.2	7.28	783.2	318.65	SDI E-FIELD
2169.0	90.20	336.25	1586.0	627.6	-536.4	770.0	9.41	825.6	319.48	SDI E-FIELD
2201.0	89.90	339.10	1586.0	657.2	-548.6	801.9	8.96	856.1	320.15	SDI E-FIELD
2233.0	90.13	341.41	1585.9	687.3	-559.4	833.9	7.25	886.2	320.86	SDI E-FIELD
2265.0	90.57	343.32	1585.8	717.8	-569.1	865.9	6.12	916.0	321.59	SDI E-FIELD
2296.0	91.39	345.61	1585.2	747.7	-577.4	896.8	7.85	944.6	322.32	SDI E-FIELD
2328.0	91.04	348.58	1584.5	778.9	-584.5	928.6	9.34	973.8	323.11	SDI E-FIELD
2358.0	91.18	350.01	1584.0	808.3	-590.1	958.3	4.79	1000.8	323.87	SDI E-FIELD
2390.0	91.11	349.88	1583.3	839.8	-595.7	989.8	0.46	1029.6	324.65	SDI E-FIELD
2422.0	90.13	349.81	1583.0	871.3	-601.3	1021.4	3.07	1058.7	325.39	SDI E-FIELD
2453.0	91.18	350.29	1582.6	901.9	-606.7	1052.0	3.72	1086.9	326.07	SDI E-FIELD
2485.0	91.31	350.36	1581.9	933.4	-612.0	1083.5	0.46	1116.2	326.75	SDI E-FIELD
2517.0	91.04	350.47	1581.3	964.9	-617.4	1115.1	0.91	1145.5	327.39	SDI E-FIELD
2549.0	91.88	351.03	1580.5	996.5	-622.5	1146.5	3.15	1175.0	328.01	SDI E-FIELD
2580.0	92.26	350.95	1579.3	1027.1	-627.4	1177.0	1.25	1203.5	328.58	SDI E-FIELD
2612.0	92.42	351.04	1578.0	1058.7	-632.4	1208.5	0.57	1233.2	329.15	SDI E-FIELD
2643.0	92.09	350.72	1576.8	1089.3	-637.3	1239.0	1.48	1262.0	329.67	SDI E-FIELD
2675.0	92.36	350.49	1575.6	1120.8	-642.5	1270.5	1.11	1291.9	330.18	SDI E-FIELD
2707.0	92.05	350.54	1574.3	1152.4	-647.8	1302.0	0.98	1321.9	330.66	SDI E-FIELD
2739.0	92.69	350.38	1573.0	1183.9	-653.1	1333.5	2.06	1352.1	331.12	SDI E-FIELD
2771.0	92.15	350.62	1571.7	1215.4	-658.3	1365.0	1.85	1382.3	331.56	SDI E-FIELD
2802.0	91.51	351.05	1570.7	1246.0	-663.3	1395.4	2.49	1411.5	331.97	SDI E-FIELD
2834.0	91.48	351.67	1569.8	1277.6	-668.1	1426.9	1.94	1441.8	332.40	SDI E-FIELD
2866.0	91.68	352.29	1569.0	1309.3	-672.5	1458.2	2.04	1471.9	332.81	SDI E-FIELD
2897.0	92.25	352.09	1567.9	1340.0	-676.7	1488.6	1.95	1501.2	333.20	SDI E-FIELD
2929.0	91.72	352.02	1566.8	1371.7	-681.2	1519.9	1.67	1531.5	333.59	SDI E-FIELD
2961.0	91.35	352.33	1565.9	1403.4	-685.5	1551.3	1.51	1561.9	333.97	SDI E-FIELD
2991.0	91.78	352.38	1565.1	1433.1	-689.5	1580.6	1.44	1590.3	334.31	SDI E-FIELD
3023.0	91.85	352.58	1564.1	1464.8	-693.7	1612.0	0.66	1620.8	334.66	SDI E-FIELD
3054.0	91.98	352.54	1563.1	1495.5	-697.7	1642.3	0.44	1650.3	334.99	SDI E-FIELD
3086.0	92.56	352.74	1561.8	1527.2	-701.8	1673.5	1.92	1680.8	335.32	SDI E-FIELD
3117.0	92.56	353.14	1560.4	1558.0	-705.6	1703.8	1.29	1710.3	335.63	SDI E-FIELD
3149.0	92.42	353.52	1559.0	1589.7	-709.3	1735.0	1.26	1740.8	335.95	SDI E-FIELD
3181.0	92.15	353.09	1557.7	1621.5	-713.1	1766.2	1.59	1771.3	336.26	SDI E-FIELD
3213.0	91.99	352.56	1556.6	1653.2	-717.0	1797.4	1.73	1802.0	336.55	SDI E-FIELD
3245.0	91.55	352.50	1555.6	1684.9	-721.2	1828.7	1.39	1832.8	336.83	SDI E-FIELD
3276.0	92.09	352.63	1554.6	1715.6	-725.2	1859.1	1.79	1862.6	337.09	SDI E-FIELD
3308.0	91.88	353.22	1553.5	1747.4	-729.2	1890.3	1.96	1893.4	337.35	SDI E-FIELD
3340.0	91.55	352.77	1552.5	1779.1	-733.1	1921.5	1.74	1924.2	337.61	SDI E-FIELD
3372.0	92.86	353.19	1551.3	1810.9	-737.0	1952.8	4.30	1955.1	337.86	SDI E-FIELD
3404.0	92.32	353.43	1549.9	1842.6	-740.7	1984.0	1.85	1985.9	338.10	SDI E-FIELD
3436.0	91.55	353.47	1548.8	1874.4	-744.3	2015.2	2.41	2016.8	338.34	SDI E-FIELD



Scientific Drilling Houston

Final Survey Report



Company: EL PASO PRODUCTION
Field: VERMEJO FIELD, NEW MEXICO
Site: RATON (D310)
Well: WELL D-310
Wellpath: RIGHT LATERAL

Date: 4/18/2006 Time: 12:54:37 Page: 3
Co-ordinate(NE) Reference: Well: WELL D-310, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,340.64Azi)
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	ClsD ft	ClsA deg	Tool
3468.0	91.88	352.72	1547.8	1906.1	-748.2	2046.4	2.56	2047.7	338.57	SDI E-FIELD
3499.0	92.39	351.64	1546.7	1936.8	-752.4	2076.7	3.85	2077.8	338.77	SDI E-FIELD
3531.0	92.45	350.26	1545.3	1968.4	-757.4	2108.2	4.31	2109.1	338.95	SDI E-FIELD
3563.0	92.63	348.95	1543.9	1999.8	-763.2	2139.8	4.13	2140.5	339.11	SDI E-FIELD
3595.0	91.92	348.38	1542.6	2031.2	-769.5	2171.4	2.84	2172.1	339.25	SDI E-FIELD
3626.0	91.58	348.15	1541.7	2061.5	-775.8	2202.1	1.32	2202.7	339.38	SDI E-FIELD
3658.0	92.02	347.62	1540.7	2092.8	-782.5	2233.9	2.15	2234.3	339.50	SDI E-FIELD
3689.0	92.29	347.14	1539.5	2123.0	-789.3	2264.6	1.78	2265.0	339.61	SDI E-FIELD
3721.0	91.55	347.52	1538.4	2154.2	-796.3	2296.4	2.60	2296.7	339.71	SDI E-FIELD
3752.0	91.95	347.26	1537.5	2184.5	-803.0	2327.2	1.54	2327.4	339.82	SDI E-FIELD
3784.0	92.83	347.17	1536.2	2215.7	-810.1	2358.9	2.76	2359.1	339.92	SDI E-FIELD
3815.0	92.73	346.84	1534.7	2245.8	-817.1	2389.7	1.11	2389.8	340.01	SDI E-FIELD
3826.0	92.29	346.75	1534.2	2256.5	-819.6	2400.6	4.08	2400.8	340.04	SDI E-FIELD
3857.0	92.29	346.75	1532.9	2286.7	-826.7	2431.4	0.00	2431.5	340.12	PROJECTED DEPTH

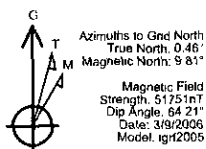


EL PASO PRODUCTION



RATON WELL D-310
VERMEJO FIELD, NEW MEXICO
ST00BP00 / RIGHT LATERAL

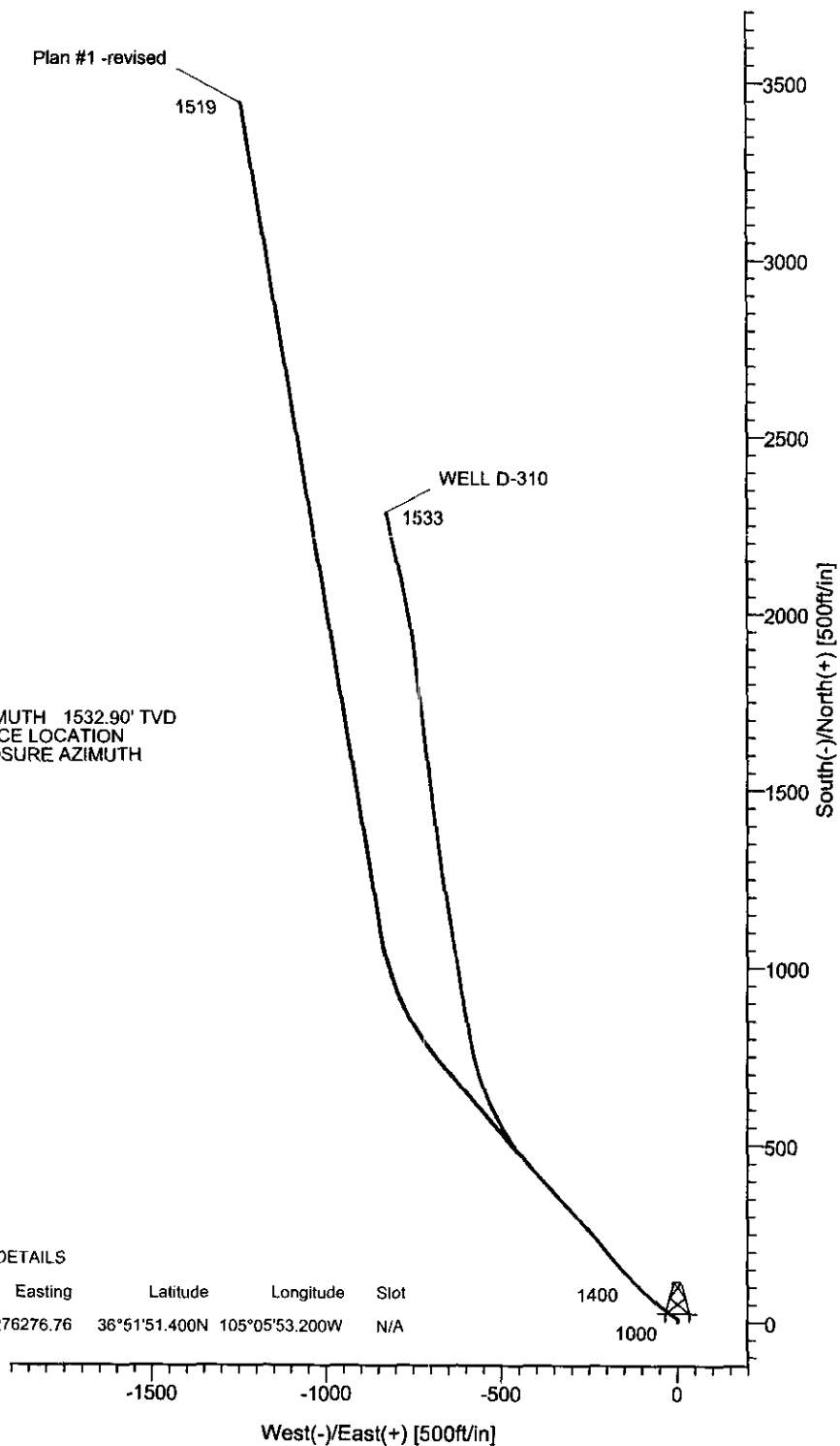
ALL DEPTHS SHOWN ARE
TRUE VERTICAL DEPTHS



3857.00' MD 92.29° INCLINATION 346.75° AZIMUTH 1532.90' TVD
2286.70' NORTH 826.70' WEST of SURFACE LOCATION
2431.50' CLOSURE DISTANCE 340.12° CLOSURE AZIMUTH

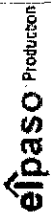
WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
WELL D-310	0.0	0.0	2134738.79	276276.76	36°51'51.400N	105°05'53.200W	N/A





EL PASO PRODUCTION



RATON WELL D-310
VERMEJO FIELD, NEW MEXICO
ST00BP00 / RIGHT LATERAL

ALL DEPTHS SHOWN ARE
MEASURED DEPTHS

