

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
1301 W. Grand Ave., Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
1220 South St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35067		*Pool Code 71629	*Pool Name Basin Fruitland Coal
*Property Code 303846	*Property Name GRASSY CANYON		*Well Number 8
*GRID No. 5380	*Operator Name XTO ENERGY INC.		*Elevation 6807'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	31	32-N	7-W		915	NORTH	2430	EAST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	31	32-N	7-W		2192	SOUTH	1779	EAST	SAN JUAN
**Dedicated Acres 320			**Joint or Infill		**Consolidation Code		**Order No.		

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

16 (19.60) (20.37) LOT 1 FD. 3 1/4" BC. 1962 B.L.M. (39.28) LOT 2 <u>SURFACE LOCATION:</u> LAT: 36.94329° N. (NAD 83) LONG: 107.60833° W. (NAD 83) LAT: 36°56'35.86" N. (NAD 27) LONG: 107°36'30.00" W. (NAD 27) LOT 3 <u>BOTTOM HOLE LOCATION:</u> LAT: 36.93805° N. (NAD 83) LONG: 107.60626° W. (NAD 83) LAT: 36°56'16.95" N. (NAD 27) LONG: 107°36'20.35" W. (NAD 27) AS-DRILLED B.H.L. B.H.L. FOOTAGES ARE AS-DRILLED AND PROVIDED BY XTO ENERGY INC. CLIENT LOT 4 FD. 2 1/2" BC. 1914 G.L.O. (19.42) (20.23)		N 84°04'00" W 2708.64' (C) (40.75) LOT 6 (38.08 AC.) LOT 5 (37.36 AC.) 2430' LOT 7 (38.05 AC.) 31 B.H.L. LOT 8 (38.14 AC.) 1779' 2192' LOT 9 (38.11 AC.) N 88°23'30" W 2673.08' (C) FD. 3 1/4" BC. 1914 G.L.O. WITNESS CORNER N 88°13'03" W 46.20 (C) CALC'D COR. S 01°05'24" W 4811.53' (M)		17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <u>Wanett McCauley</u> Date: <u>11-12-10</u> Printed Name: <u>Wanett McCauley</u> 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. SEPTEMBER 30, 2010 Date of Survey Signature and Seal of Professional Surveyor: <u>[Signature]</u> CERTIFIED PROFESSIONAL LAND SURVEYOR 105-10 Certificate Number
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Grassy Canyon #8
San Juan Co., New Mexico

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	162.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	350.00	0.00	162.82	350.00	0.00	0.00	0.00	0.00	0.00	0.00
3	1850.00	45.00	162.82	1700.47	-534.44	165.19	3.00	162.82	559.38	559.38
4	3053.60	45.00	162.82	2551.55	-1347.55	416.52	0.00	0.00	1410.46	1410.46
5	4220.26	10.00	162.82	3570.38	-1854.27	573.14	3.00	180.00	1940.83	1940.83
6	4554.97	10.00	162.82	3900.00	-1909.80	590.30	0.00	0.00	1998.95	PBHL

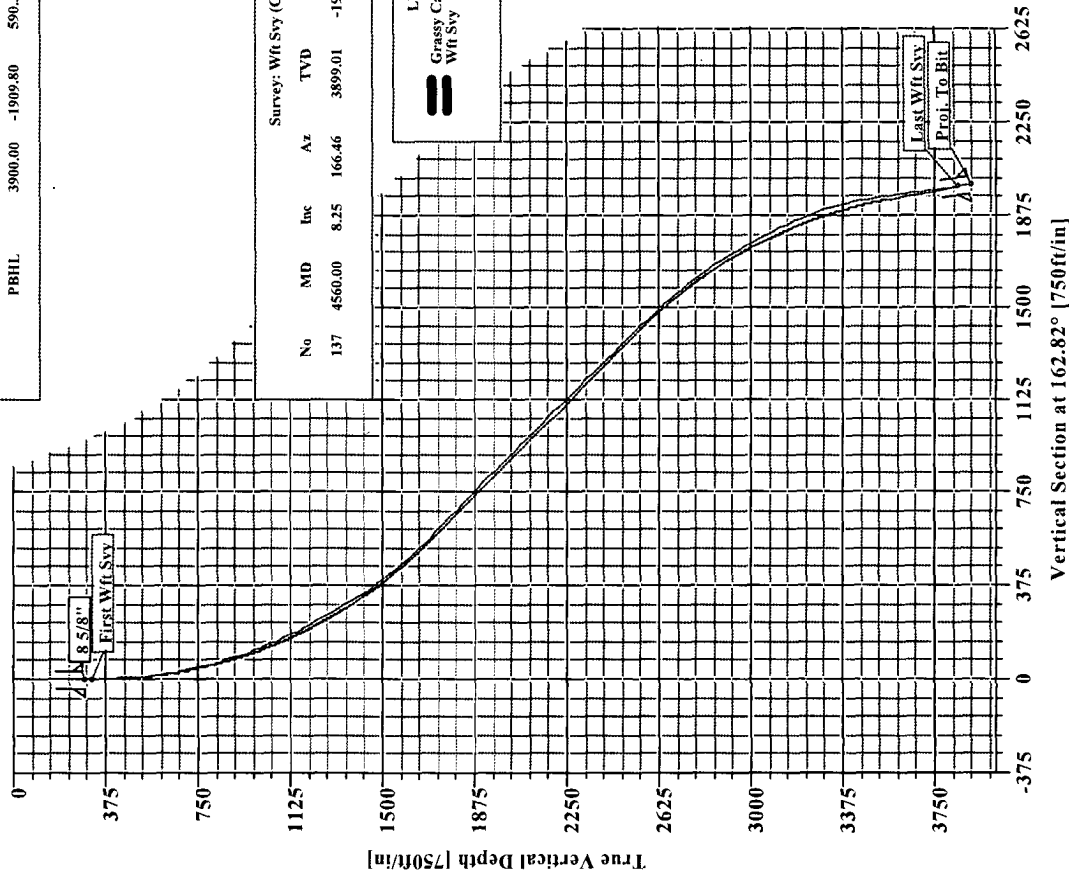
WELL DETAILS

Name	+N/-S	+E/-W	Northing	Eastng	Latitude	Longitude	Slot
Grassy Canyon #8	0.00	0.00	2162768.57	2788857.62	36°56'35.844N	107°36'29.880W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape	Point
PBHL	3900.00	-1909.80	590.30	36°56'16.959N	107°36'22.608W		

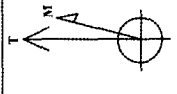
KB ELEV: 6819'
GI ELEV: 6807'



Survey: Wft Svy (Grassy Canyon #8/S Well)

No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
137	4560.00	8.25	166.46	3899.01	-1909.55	595.48	0.00	0.00	2000.24

Total Correction to True North 9.96'



Azimuths to True North
Magnetic North: 9.96°
Strength: 51002nT
Dip Angle: 63.68°
Date: 8/23/2010
Model: IGRF2010

FIELD DETAILS

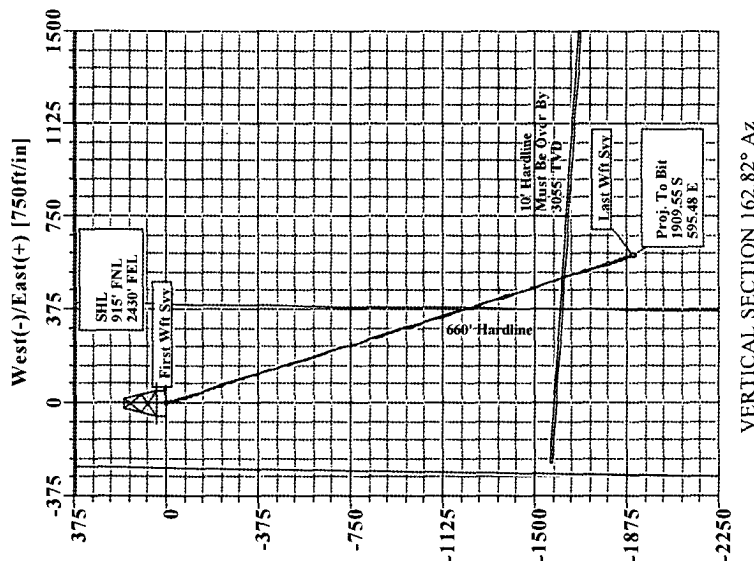
San Juan, NM (NAD 83)
Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980
Zone: New Mexico, Western Zone
Magnetic Model: IGRF2010
System Datum: Mean Sea Level
Local North: True North

SITE DETAILS

Grassy Canyon #8
Site Centre Latitude: 36°56'35.844N
Longitude: 107°36'29.880W
Ground Level: 6807.00
Positional Uncertainty: 0.00
Convergence: 0.14

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	2613.00	3141.87	Kirtland Shale
2	3055.00	3684.94	Frutland Formation
3	3361.00	4015.15	Upper Fruitland Coal
4	3596.00	4254.04	Pictured Cliffs Tongue
5	3708.00	4367.07	Pictured Cliffs
6	3806.00	4466.02	Base Pictured Cliffs



Vertical Section 162.82° Az

Survey: Wft Svy (Grassy Canyon #8/S Well)

Created By: Russell W. Joyner

Date: 9/2/2010



Weatherford International Ltd.

WFT Survey Report Lat, Long

**Weatherford**

Company: XTO	Date: 9/2/2010	Time: 08:08:05	Page: 1
Field: San Juan, NM (NAD 83)	Co-ordinate(NE) Reference: Well: Grassy Canyon #8, True North		
Site: Grassy Canyon #8	Vertical (TVD) Reference: SITE 6819.0		
Well: Grassy Canyon #8	Section (VS) Reference: Well (0.00N,0.00E,162.82Azi)		
Wellpath: S Well	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey: Wft Svy	Start Date: 8/30/2010
Company: Weatherford International Ltd.	Engineer: Russell W. Joyner
Tool: CDS MWD2;ISCWSA	Tied-to: From Surface

Field: San Juan, NM (NAD 83)

Map System: US State Plane Coordinate System 1983
Geo Datum: GRS 1980
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Western Zone
Coordinate System: Well Centre
Geomagnetic Model: IGRF2010

Site: Grassy Canyon #8

Site Position:	Northing: 2162768.57 ft	Latitude: 36 56 35.844 N
From: Geographic	Easting: 2788857.62 ft	Longitude: 107 36 29.880 W
Position Uncertainty: 0.00 ft		North Reference: True
Ground Level: 6807.00 ft		Grid Convergence: 0.14 deg

Well: Grassy Canyon #8	Slot Name:
Well Position: +N/-S 0.00 ft	Northing: 2162768.57 ft
+E/-W 0.00 ft	Easting: 2788857.62 ft
Position Uncertainty: 0.00 ft	Latitude: 36 56 35.844 N
	Longitude: 107 36 29.880 W

Wellpath: S Well	Drilled From: Surface
Current Datum: SITE	Tie-on Depth: 0.00 ft
Magnetic Data: 8/23/2010	Above System Datum: Mean Sea Level
Field Strength: 51002 nT	Declination: 9.96 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle: 63.68 deg
ft	+N/-S
	ft
0.00	0.00
	ft
	0.00
	162.82

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Lat	Min	Sec	Long	Min	Sec	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36	56	35.844	107	36	29.880	First Wft Svy
317.00	0.65	180.76	316.99	-1.80	-0.02	1.71	0.21	36	56	35.826	107	36	29.880	
348.00	0.75	180.34	347.99	-2.18	-0.03	2.07	0.32	36	56	35.822	107	36	29.880	
378.00	1.31	173.84	377.99	-2.71	0.01	2.60	1.90	36	56	35.817	107	36	29.880	
409.00	1.94	174.21	408.97	-3.59	0.10	3.46	2.03	36	56	35.809	107	36	29.879	
440.00	2.63	169.59	439.95	-4.81	0.28	4.68	2.30	36	56	35.796	107	36	29.877	
471.00	3.56	167.59	470.90	-6.45	0.62	6.34	3.02	36	56	35.780	107	36	29.872	
502.00	4.63	165.84	501.82	-8.60	1.13	8.55	3.47	36	56	35.759	107	36	29.866	
533.00	5.56	167.84	532.70	-11.28	1.75	11.30	3.05	36	56	35.732	107	36	29.858	
564.00	6.50	165.00	563.53	-14.45	2.52	14.55	3.18	36	56	35.701	107	36	29.849	
594.00	7.38	165.59	593.31	-17.95	3.44	18.17	2.94	36	56	35.666	107	36	29.838	
625.00	8.19	164.84	624.02	-22.01	4.51	22.36	2.63	36	56	35.626	107	36	29.824	
656.00	9.19	165.21	654.67	-26.54	5.72	27.04	3.23	36	56	35.582	107	36	29.809	
686.00	10.25	164.59	684.24	-31.43	7.04	32.11	3.55	36	56	35.533	107	36	29.793	
717.00	11.25	165.96	714.69	-37.02	8.51	37.88	3.33	36	56	35.478	107	36	29.775	
748.00	12.31	166.09	745.04	-43.16	10.04	44.20	3.42	36	56	35.417	107	36	29.756	
779.00	13.25	167.96	775.27	-49.84	11.57	51.04	3.31	36	56	35.351	107	36	29.737	
809.00	14.44	168.21	804.40	-56.87	13.06	58.19	3.97	36	56	35.282	107	36	29.719	
839.00	15.50	166.71	833.38	-64.43	14.74	65.91	3.76	36	56	35.207	107	36	29.698	
870.00	16.75	164.96	863.16	-72.78	16.85	74.51	4.33	36	56	35.124	107	36	29.672	
901.00	17.94	163.34	892.75	-81.67	19.38	83.75	4.14	36	56	35.036	107	36	29.641	
931.00	19.19	162.46	921.19	-90.79	22.19	93.30	4.27	36	56	34.946	107	36	29.607	
962.00	20.06	161.84	950.39	-100.70	25.38	103.71	2.89	36	56	34.848	107	36	29.567	
994.00	21.06	161.71	980.35	-111.38	28.90	114.94	3.13	36	56	34.743	107	36	29.524	



Weatherford International Ltd.

WFT Survey Report Lat, Long



Company: XTO
Field: San Juan, NM (NAD 83)
Site: Grassy Canyon #8
Well: Grassy Canyon #8
Wellpath: S Well

Date: 9/2/2010 Time: 08:08:05 Page: 2
Co-ordinate(NE) Reference: Well: Grassy Canyon #8, True North
Vertical (TVD) Reference: SITE 6819.0
Section (VS) Reference: Well (0.00N,0.00E,162.82Azi)
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	Lat	Min	Sec	Long	Min	Sec	Comment
1026.00	22.19	161.96	1010.09	-122.58	32.57	126.74	3.54	36	56	34.632	107	36	29.479	
1057.00	23.00	162.09	1038.72	-133.91	36.25	138.64	2.62	36	56	34.520	107	36	29.433	
1089.00	23.56	161.96	1068.11	-145.94	40.15	151.29	1.76	36	56	34.401	107	36	29.385	
1120.00	24.19	161.71	1096.46	-157.86	44.07	163.84	2.06	36	56	34.283	107	36	29.337	
1152.00	24.88	161.71	1125.57	-170.48	48.24	177.12	2.16	36	56	34.158	107	36	29.286	
1182.00	25.44	161.59	1152.72	-182.59	52.25	189.87	1.87	36	56	34.039	107	36	29.236	
1213.00	26.19	162.09	1180.63	-195.41	56.46	203.37	2.52	36	56	33.912	107	36	29.184	
1245.00	26.69	162.09	1209.28	-208.97	60.84	217.62	1.56	36	56	33.778	107	36	29.131	
1277.00	27.44	162.21	1237.78	-222.83	65.30	232.18	2.35	36	56	33.641	107	36	29.076	
1309.00	28.31	162.21	1266.06	-237.08	69.87	247.14	2.72	36	56	33.500	107	36	29.019	
1340.00	29.25	161.71	1293.23	-251.27	74.50	262.06	3.13	36	56	33.359	107	36	28.962	
1371.00	30.44	161.21	1320.12	-265.89	79.40	277.48	3.92	36	56	33.215	107	36	28.902	
1403.00	31.44	161.21	1347.57	-281.47	84.70	293.93	3.12	36	56	33.061	107	36	28.837	
1434.00	32.38	161.21	1373.88	-296.98	89.98	310.31	3.03	36	56	32.907	107	36	28.772	
1466.00	33.38	160.84	1400.76	-313.41	95.63	327.67	3.19	36	56	32.745	107	36	28.702	
1498.00	34.38	161.21	1427.32	-330.28	101.43	345.50	3.19	36	56	32.578	107	36	28.631	
1529.00	35.44	161.71	1452.74	-347.10	107.07	363.24	3.54	36	56	32.412	107	36	28.561	
1561.00	36.50	162.34	1478.64	-364.98	112.87	382.03	3.51	36	56	32.235	107	36	28.490	
1592.00	37.38	163.09	1503.42	-382.76	118.40	400.66	3.19	36	56	32.059	107	36	28.421	
1623.00	38.31	163.59	1527.90	-400.98	123.85	419.68	3.16	36	56	31.879	107	36	28.354	
1654.00	39.31	164.09	1552.05	-419.65	129.26	439.10	3.38	36	56	31.694	107	36	28.288	
1686.00	40.25	164.46	1576.65	-439.35	134.81	459.57	3.03	36	56	31.500	107	36	28.219	
1718.00	40.94	164.34	1600.94	-459.41	140.41	480.38	2.17	36	56	31.301	107	36	28.150	
1749.00	41.56	164.34	1624.25	-479.09	145.92	500.82	2.00	36	56	31.107	107	36	28.082	
1779.00	42.25	164.46	1646.58	-498.39	151.31	520.85	2.32	36	56	30.916	107	36	28.016	
1810.00	43.11	163.88	1669.37	-518.61	157.05	541.86	3.05	36	56	30.716	107	36	27.945	
1842.00	44.06	162.71	1692.55	-539.74	163.39	563.92	3.89	36	56	30.507	107	36	27.867	
1873.00	44.88	162.34	1714.67	-560.45	169.91	585.63	2.77	36	56	30.302	107	36	27.787	
1904.00	45.56	162.46	1736.51	-581.42	176.56	607.63	2.21	36	56	30.095	107	36	27.705	
1935.00	45.88	162.71	1758.15	-602.60	183.21	629.83	1.18	36	56	29.885	107	36	27.623	
1967.00	46.44	162.71	1780.31	-624.64	190.07	652.91	1.75	36	56	29.667	107	36	27.539	
1998.00	47.06	162.96	1801.55	-646.21	196.73	675.49	2.08	36	56	29.454	107	36	27.456	
2028.00	46.56	163.09	1822.09	-667.13	203.12	697.36	1.70	36	56	29.247	107	36	27.378	
2060.00	46.75	163.34	1844.05	-689.41	209.84	720.63	0.82	36	56	29.027	107	36	27.295	
2091.00	46.06	163.21	1865.43	-710.91	216.30	743.08	2.25	36	56	28.814	107	36	27.215	
2122.00	45.13	163.21	1887.12	-732.12	222.69	765.23	3.00	36	56	28.605	107	36	27.137	
2153.00	44.63	162.96	1909.08	-753.04	229.06	787.10	1.71	36	56	28.398	107	36	27.058	
2185.00	44.88	163.21	1931.81	-774.60	235.61	809.63	0.96	36	56	28.185	107	36	26.978	
2216.00	45.00	163.84	1953.75	-795.60	241.82	831.53	1.49	36	56	27.977	107	36	26.901	
2248.00	44.44	163.46	1976.49	-817.20	248.16	854.04	1.94	36	56	27.763	107	36	26.823	
2278.00	44.44	162.71	1997.91	-837.30	254.27	875.05	1.75	36	56	27.565	107	36	26.748	
2311.00	44.88	162.96	2021.38	-859.46	261.12	898.24	1.44	36	56	27.345	107	36	26.663	
2342.00	44.81	162.46	2043.36	-880.33	267.62	920.10	1.16	36	56	27.139	107	36	26.583	
2373.00	44.69	161.71	2065.38	-901.10	274.33	941.93	1.75	36	56	26.934	107	36	26.501	
2404.00	44.94	162.09	2087.37	-921.87	281.12	963.77	1.18	36	56	26.728	107	36	26.417	
2434.00	45.25	162.84	2108.55	-942.13	287.52	985.02	2.05	36	56	26.528	107	36	26.338	
2466.00	45.38	163.21	2131.05	-963.89	294.16	1007.77	0.92	36	56	26.313	107	36	26.256	
2497.00	45.88	163.34	2152.73	-985.11	300.54	1029.93	1.64	36	56	26.103	107	36	26.178	
2528.00	45.81	163.46	2174.32	-1006.43	306.89	1052.17	0.36	36	56	25.892	107	36	26.099	
2560.00	45.82	163.63	2196.62	-1028.43	313.39	1075.11	0.38	36	56	25.675	107	36	26.019	
2590.00	45.19	163.84	2217.65	-1048.98	319.39	1096.51	2.16	36	56	25.471	107	36	25.946	
2622.00	44.81	163.59	2240.28	-1070.70	325.73	1119.14	1.31	36	56	25.257	107	36	25.867	



Weatherford International Ltd.

WFT Survey Report Lat, Long

**Weatherford**

Company: XTO
Field: San Juan, NM (NAD 83)
Site: Grassy Canyon #8
Well: Grassy Canyon #8
Wellpath: S Well

Date: 9/2/2010 Time: 08:08:05 Page: 3
Co-ordinate(NE) Reference: Well: Grassy Canyon #8, True North
Vertical (TVD) Reference: SITE 6819.0
Section (VS) Reference: Well (0.00N,0.00E,162.82Azi)
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	Lat	Min	Sec	Long	Min	Sec	Comment
2654.00	44.19	162.96	2263.10	-1092.18	332.18	1141.56	2.38	36	56	25.044	107	36	25.788	
2685.00	43.50	162.09	2285.46	-1112.66	338.63	1163.04	2.96	36	56	24.842	107	36	25.709	
2718.00	43.44	162.09	2309.41	-1134.26	345.61	1185.74	0.18	36	56	24.628	107	36	25.622	
2749.00	43.51	161.71	2331.90	-1154.54	352.24	1207.06	0.87	36	56	24.428	107	36	25.541	
2780.00	43.81	162.34	2354.33	-1174.89	358.84	1228.46	1.70	36	56	24.226	107	36	25.460	
2811.00	44.06	163.34	2376.66	-1195.44	365.19	1249.97	2.38	36	56	24.023	107	36	25.381	
2842.00	44.19	162.84	2398.91	-1216.09	371.47	1271.56	1.20	36	56	23.819	107	36	25.304	
2873.00	44.63	162.59	2421.05	-1236.81	377.91	1293.25	1.53	36	56	23.614	107	36	25.225	
2903.00	44.50	163.21	2442.43	-1256.93	384.10	1314.30	1.51	36	56	23.415	107	36	25.148	
2934.00	44.31	162.71	2464.57	-1277.67	390.46	1335.99	1.28	36	56	23.210	107	36	25.070	
2966.00	44.75	161.84	2487.39	-1299.04	397.29	1358.43	2.35	36	56	22.999	107	36	24.986	
2997.00	44.94	162.46	2509.37	-1319.85	403.99	1380.29	1.54	36	56	22.793	107	36	24.903	
3029.00	44.88	163.21	2532.03	-1341.44	410.66	1402.88	1.67	36	56	22.579	107	36	24.821	
3062.00	44.50	162.71	2555.49	-1363.62	417.46	1426.09	1.57	36	56	22.360	107	36	24.737	
3093.00	44.13	161.71	2577.67	-1384.25	424.08	1447.74	2.55	36	56	22.156	107	36	24.656	
3124.00	43.63	161.34	2600.01	-1404.63	430.89	1469.23	1.81	36	56	21.955	107	36	24.572	
3156.00	42.81	161.21	2623.33	-1425.38	437.92	1491.13	2.58	36	56	21.749	107	36	24.485	
3187.00	42.19	161.21	2646.19	-1445.21	444.67	1512.07	2.00	36	56	21.553	107	36	24.402	
3219.00	41.31	160.96	2670.06	-1465.36	451.57	1533.36	2.80	36	56	21.354	107	36	24.317	
3250.00	40.25	161.50	2693.54	-1484.53	458.09	1553.60	3.60	36	56	21.164	107	36	24.237	
3282.00	39.38	161.71	2718.12	-1503.98	464.55	1574.09	2.75	36	56	20.972	107	36	24.157	
3313.00	38.13	161.59	2742.29	-1522.40	470.66	1593.49	4.04	36	56	20.790	107	36	24.082	
3345.00	36.94	161.84	2767.67	-1540.91	476.78	1612.98	3.75	36	56	20.607	107	36	24.007	
3377.00	36.06	162.34	2793.39	-1559.02	482.63	1632.01	2.90	36	56	20.428	107	36	23.935	
3408.00	35.13	162.13	2818.60	-1576.20	488.14	1650.06	3.03	36	56	20.258	107	36	23.867	
3440.00	34.25	161.89	2844.91	-1593.52	493.76	1668.27	2.78	36	56	20.087	107	36	23.798	
3472.00	33.19	161.71	2871.52	-1610.40	499.31	1686.03	3.33	36	56	19.920	107	36	23.729	
3504.00	32.31	162.34	2898.44	-1626.86	504.66	1703.34	2.95	36	56	19.757	107	36	23.663	
3534.00	31.56	162.84	2923.90	-1642.00	509.40	1719.21	2.65	36	56	19.607	107	36	23.605	
3566.00	30.69	162.96	2951.29	-1657.81	514.27	1735.75	2.73	36	56	19.451	107	36	23.545	
3597.00	30.00	163.09	2978.04	-1672.79	518.84	1751.41	2.24	36	56	19.303	107	36	23.489	
3629.00	29.19	163.34	3005.87	-1687.92	523.40	1767.21	2.56	36	56	19.153	107	36	23.432	
3661.00	28.44	163.34	3033.90	-1702.70	527.83	1782.63	2.34	36	56	19.007	107	36	23.378	
3694.00	27.84	163.63	3063.00	-1717.62	532.25	1798.20	1.86	36	56	18.860	107	36	23.323	
3725.00	27.00	163.21	3090.52	-1731.30	536.32	1812.47	2.78	36	56	18.724	107	36	23.273	
3756.00	26.00	162.09	3118.26	-1744.51	540.45	1826.30	3.61	36	56	18.594	107	36	23.223	
3786.00	24.63	160.96	3145.38	-1756.67	544.51	1839.13	4.84	36	56	18.473	107	36	23.173	
3818.00	22.75	160.21	3174.68	-1768.80	548.78	1851.97	5.95	36	56	18.354	107	36	23.120	
3848.00	21.13	159.34	3202.51	-1779.32	552.65	1863.17	5.51	36	56	18.250	107	36	23.072	
3878.00	20.31	159.46	3230.57	-1789.25	556.39	1873.76	2.74	36	56	18.151	107	36	23.026	
3910.00	19.75	160.59	3260.63	-1799.55	560.13	1884.71	2.13	36	56	18.049	107	36	22.980	
3941.00	18.44	161.84	3289.93	-1809.15	563.40	1894.84	4.43	36	56	17.955	107	36	22.940	
3973.00	16.81	163.21	3320.43	-1818.39	566.31	1904.53	5.26	36	56	17.863	107	36	22.904	
4005.00	15.13	163.59	3351.19	-1826.83	568.83	1913.34	5.26	36	56	17.780	107	36	22.873	
4036.00	13.63	163.34	3381.22	-1834.21	571.02	1921.03	4.84	36	56	17.707	107	36	22.846	
4067.00	12.31	162.84	3411.43	-1840.87	573.04	1927.99	4.27	36	56	17.641	107	36	22.821	
4099.00	10.63	161.81	3442.79	-1846.93	574.97	1934.35	5.29	36	56	17.581	107	36	22.797	
4131.00	9.25	157.71	3474.30	-1852.11	576.87	1939.87	4.84	36	56	17.530	107	36	22.774	
4163.00	8.81	157.46	3505.91	-1856.76	578.78	1944.87	1.38	36	56	17.484	107	36	22.750	
4195.00	8.31	157.09	3537.55	-1861.15	580.62	1949.61	1.57	36	56	17.440	107	36	22.728	
4226.00	8.06	156.84	3568.24	-1865.21	582.35	1954.00	0.81	36	56	17.400	107	36	22.706	
4258.00	7.94	157.34	3599.92	-1869.31	584.08	1958.43	0.43	36	56	17.360	107	36	22.685	
4289.00	7.75	162.09	3630.63	-1873.28	585.55	1962.65	2.18	36	56	17.320	107	36	22.667	



Weatherford International Ltd.

WFT Survey Report Lat, Long



Company: XTO
Field: San Juan, NM (NAD 83)
Site: Grassy Canyon #8
Well: Grassy Canyon #8
Wellpath: S Well

Date: 9/2/2010 Time: 08:08:05 Page: 4
Co-ordinate(NE) Reference: Well: Grassy Canyon #8, True North
Vertical (TVD) Reference: SITE 6819.0
Section (VS) Reference: Well (0.00N,0.00E,162.82Azi)
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	Lat	Min	Sec	Long	Min	Sec	Comment
4320.00	7.81	162.84	3661.35	-1877.28	586.81	1966.85	0.38	36	56	17.281	107	36	22.651	
4351.00	7.63	162.59	3692.07	-1881.26	588.05	1971.01	0.59	36	56	17.242	107	36	22.636	
4382.00	7.63	163.84	3722.79	-1885.20	589.24	1975.13	0.54	36	56	17.203	107	36	22.622	
4413.00	7.94	164.59	3753.51	-1889.24	590.38	1979.33	1.05	36	56	17.163	107	36	22.607	
4445.00	8.13	165.09	3785.19	-1893.55	591.55	1983.80	0.63	36	56	17.120	107	36	22.593	
4476.00	8.25	166.21	3815.88	-1897.83	592.65	1988.21	0.64	36	56	17.078	107	36	22.580	
4507.00	8.25	166.46	3846.56	-1902.15	593.70	1992.65	0.12	36	56	17.035	107	36	22.567	Last Wft Svy
4560.00	8.25	166.46	3899.01	-1909.55	595.48	2000.24	0.00	36	56	16.962	107	36	22.545	Proj. To Bit

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
291.00	290.99	8.625	8.625	8 5/8"
4554.97	3894.03	5.500	5.500	5 1/2"

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
3141.87	2613.00	Kirtland Shale		0.00	0.00
3684.94	3055.00	Fruitland Formation		0.00	0.00
4015.15	3361.00	Upper Fruitland Coal		0.00	0.00
4254.04	3596.00	Pictured Cliffs Tongue		0.00	0.00
4367.07	3708.00	Pictured Cliffs		0.00	0.00
4466.02	3806.00	Base Pictured Cliffs		0.00	0.00