

"As Drilled"

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 July, 16, 2010
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-34912	² Pool Code 71629	³ Pool Name Basin Fruitland Coal
⁴ Property Code 022783	⁵ Property Name HB McGRADY A	⁶ Well Number 1H
⁷ GRID No. 5380	⁸ Operator Name XTO ENERGY INC.	⁹ Elevation 6011'

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
I	14	27-N	12-W		1800	SOUTH	805	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
M	14	27-N	12-W		794	SOUTH	1003	WEST	SAN JUAN

¹² Dedicated Acres 52.320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. RCVD SEP 6 '11
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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

16 "AS-DRILLED" BHL BHL FOOTAGES ARE "AS-DRILLED" AND PROVIDED BY XTO ENERGY INC. CLIENT SURFACE: LAT: 36.57286° N. (NAD 83) LONG: 108.07477° W. (NAD 83) LAT: 36°34'22.29085" N. (NAD 27) LONG: 108°04'26.94055" W. (NAD 27) FD 2 1/2" BC 1930 GLO 14 FD 2 1/2" BC 1911 GLO BOTTOM HOLE: LAT: 36.57012° N. (NAD 83) LONG: 108.08659° W. (NAD 83) LAT: 36°34'12.41029" N. (NAD 27) LONG: 108°05'09.47299" W. (NAD 27) SHL 805' 1003' BHL 794' FD 2 1/2" BC 1911 GLO N 89°52'40" W 2640.03' (M) N 89°52'39" W 2640.08' (M) FD 2 1/2" BC 1911 GLO N 0°02'20" E 2638.60' (M) N 0°02'28" E 2641.51' (M)	17 DIST. 3 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. <u>Dolena Johnson</u> Signature Date Dolena Johnson 8-31-11 Printed Name dee-johnson@xtoenergy.com E-mail Address	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 belief. DATE: 8/28/11 Date of Survey <u>[Signature]</u> Signature of Registered Professional Surveyor NEW MEXICO REGISTERED PROFESSIONAL LAND SURVEYOR (8894) -28- Certificate Number
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W



HB McGrady A #1H
San Juan Co., New Mexico



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

CASING DETAILS

No.	TVD	MD	Name	Size
1	300.00	300.00	9 5/8"	9.625
2	1540.83	2344.00	7"	7.000

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	590.00	1.81	276.40	589.98	2.30	-3.52	0.00	0.00	2.74	
2	2106.97	90.76	253.64	1537.00	-264.71	-954.94	5.87	-22.76	990.89	
3	5044.53	90.76	253.64	1498.08	-1091.89	-3773.36	0.00	0.00	3928.17	PBHL

TARGET DETAILS

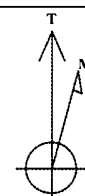
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	1498.08	-1091.89	-3773.36	36°34'11.500N	108°05'15.430W	Point

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
HB McGrady A #1H	0.00	0.00	2027923.58	2652203.21	36°34'22.300N	108°04'29.170W	N/A

LEGEND

HB McGrady A #1H, 1, Plan #2
Wft Svy



Azimuths to True North
Magnetic North: 10.01°

Magnetic Field
Strength: 50645nT
Dip Angle: 63.26°
Date: 6/15/2011
Model: IGRF2010

Total Correction To True North 10.01°

FORMATION TOP DETAILS

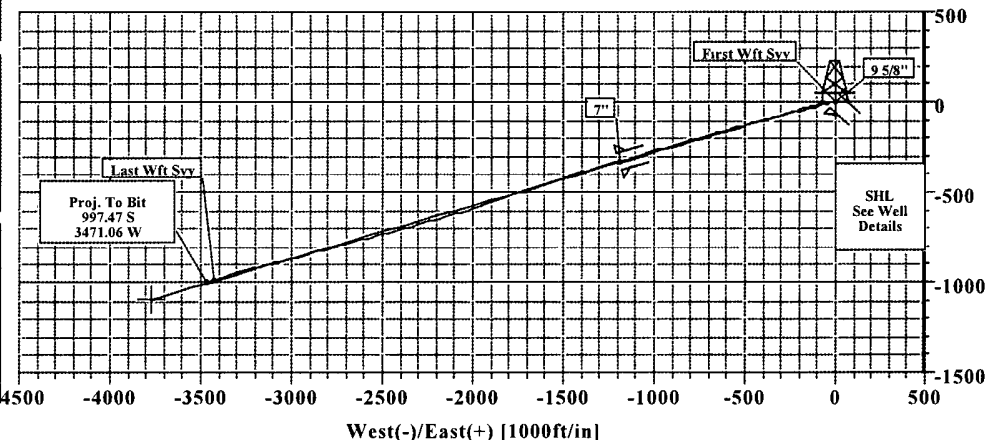
No.	TVDPath	MDPath	Formation
1	385.00	385.01	Ojo Alamo SS
2	508.99	509.00	Kirtland Shale
3	1062.00	1089.86	Fruitland Formation
4	1396.00	1584.99	Upper Fruitland Coal
5	1540.20	2314.52	Lower Fruitland Coal
6	1648.60	2819.61	Base of Lower Coal

SITE DETAILS

HB McGrady A#1H

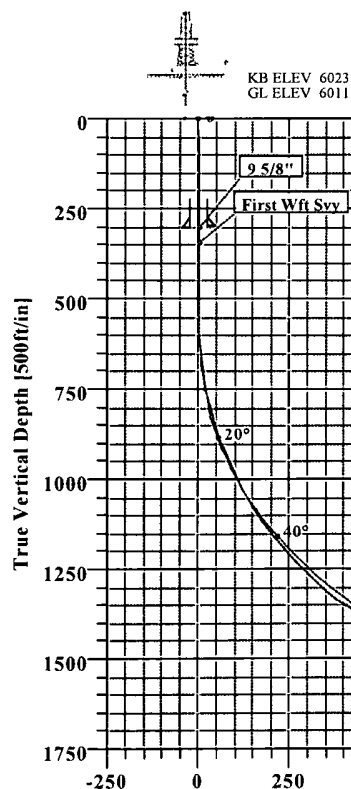
Site Centre Latitude: 36°34'22.300N
Longitude: 108°04'29.170W

Ground Level: 6011.00
Positional Uncertainty: 0.00
Convergence: -0.14



Survey: Wft Svy (HB McGrady A #1H/1)

No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
145	4721.00	90.86	254.09	1532.84	-997.47	-3471.06	0.00	0.00	3611.53



Vertical Section at 253.86° [500ft/in]

Survey Wft Svy (HB McGrady A #1H/1)

Created By Russell W Joyner

Date 7/20/2011



Weatherford International Ltd.

WFT Survey Report Lat, Long



Weatherford

Company: XTO	Date: 7/20/2011	Time: 07.01.48	Page: 1
Field: San Juan, NM (NAD 83)	Co-ordinate(NE) Reference: Well: HB McGrady A #1H, True North		
Site: HB McGrady A#1H	Vertical (TVD) Reference: SITE 6023 0		
Well: HB McGrady A #1H	Section (VS) Reference: Well (0.00N,0.00E,253 86Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey: Wft Svy	Start Date: 7/8/2011
Company: Weatherford International Ltd.	Engineer: Russell W. Joyner
Tool: MWD,MWD - Standard	Tied-to: From Surface

Field: San Juan, NM (NAD 83)	
Map System: US State Plane Coordinate System 1983	Map Zone: New Mexico, Western Zone
Geo Datum: GRS 1980	Coordinate System: Well Centre
Sys Datum: Mean Sea Level	Geomagnetic Model: IGRF2010

Site: HB McGrady A#1H		
Site Position:	Northing: 2027923 58 ft	Latitude: 36 34 22.300 N
From: Geographic	Easting: 2652203 21 ft	Longitude: 108 4 29 170 W
Position Uncertainty: 0.00 ft		North Reference: True
Ground Level: 6011 00 ft		Grid Convergence: -0 14 deg

Well: HB McGrady A #1H	Slot Name:
Well Position: +N/-S 0.00 ft	Latitude: 36 34 22.300 N
+E/-W 0.00 ft	Longitude: 108 4 29.170 W
Position Uncertainty: 0.00 ft	

Wellpath: 1	Drilled From: Surface		
Current Datum: SITE	Tie-on Depth: 0 00 ft		
Magnetic Data: 6/15/2011	Above System Datum: Mean Sea Level		
Field Strength: 50645 nT	Declination: 10 01 deg		
Vertical Section: Depth From (TVD)	Mag Dip Angle: 63.26 deg		
ft	+N/-S	+E/-W	Direction
	ft	ft	deg
0.00	0.00	0.00	253.86

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	34	22.300	108	4	29.170	
300 00	0.39	311.33	300.00	0 68	-0.77	0.55	0.13	36	34	22.307	108	4	29.179	9 5/8" First Wft Sv
345.00	0.45	311.33	345.00	0 89	-1.02	0.73	0.13	36	34	22.309	108	4	29.182	
376 00	0.58	306.71	376.00	1 07	-1 23	0.89	0 44	36	34	22.311	108	4	29.185	
407.00	0.48	311.01	406.99	1 25	-1.46	1.05	0 35	36	34	22.312	108	4	29.188	
438.00	0.58	295.05	437.99	1 40	-1.70	1.24	0 57	36	34	22.314	108	4	29.191	
468 00	0 50	307.76	467.99	1 54	-1.94	1.43	0 48	36	34	22.315	108	4	29.194	
498 00	0 75	303.64	497.99	1 73	-2.21	1.64	0 85	36	34	22.317	108	4	29.197	
528.00	0.56	308.14	527.99	1 93	-2.49	1.85	0 66	36	34	22.319	108	4	29.200	
559.00	0.88	297.01	558.98	2 13	-2.82	2.11	1 12	36	34	22 321	108	4	29.205	
590.00	1.81	276.40	589.98	2 30	-3.52	2.74	3 33	36	34	22 323	108	4	29 213	
620.00	3.13	268.64	619.95	2 33	-4.80	3.97	4 53	36	34	22.323	108	4	29.229	
650.00	4.56	265.89	649.88	2 23	-6.81	5.93	4 80	36	34	22.322	108	4	29.254	
680.00	5.85	263.58	679.76	1 97	-9.52	8.60	4 36	36	34	22.319	108	4	29.287	
711.00	7.63	262.51	710.54	1 52	-13.13	12.19	5 76	36	34	22.315	108	4	29.331	
741.00	9.44	262.64	740.21	0 95	-17.55	16.59	6 03	36	34	22 309	108	4	29.385	
772.00	11 56	262 76	770 69	0 23	-23.15	22.17	6 84	36	34	22.302	108	4	29.454	
803.00	13 63	262.51	800.94	-0 64	-29.85	28 85	6 68	36	34	22.294	108	4	29.536	
833.00	16.00	262 26	829 94	-1 65	-37.46	36.44	7 90	36	34	22.284	108	4	29.629	
865 00	18 24	260 45	860.52	-3 08	-46.77	45.78	7 19	36	34	22 270	108	4	29 743	
896 00	20.38	259 26	889.77	-4.89	-56.86	55.97	7 02	36	34	22 252	108	4	29.867	
926 00	22.50	257.51	917.70	-7 10	-67.59	66.90	7 38	36	34	22.230	108	4	29.999	
957 00	24.94	257.39	946.08	-9.82	-79.76	79.35	7 87	36	34	22 203	108	4	30.148	
989.00	27.08	257.54	974.83	-12 86	-93.46	93.35	6 69	36	34	22.173	108	4	30.316	



Weatherford International Ltd.

WFT Survey Report Lat, Long

**Weatherford**

Company: XTO
Field: San Juan, NM (NAD 83)
Site: HB McGrady A#1H
Well: HB McGrady A #1H
Wellpath: 1

Date: 7/20/2011
Co-ordinate(NE) Reference:
Vertical (TVD) Reference:
Section (VS) Reference:
Survey Calculation Method:

Time: 07:01:48
Well: HB McGrady A #1H, True North
SITE 6023.0
Well (0.00N,0.00E,253.86Azi)
Minimum Curvature

Page: 2
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
1020.00	29.00	257.14	1002.19	-16.06	-107.68	107.90	6.22	36	34	22.141	108	4	30.490	
1051.00	30.88	256.01	1029.05	-19.65	-122.73	123.35	6.33	36	34	22.106	108	4	30.675	
1083.00	32.75	254.76	1056.25	-23.91	-139.05	140.21	6.20	36	34	22.064	108	4	30.875	
1114.00	34.44	254.01	1082.07	-28.53	-155.57	157.37	5.61	36	34	22.018	108	4	31.077	
1145.00	36.53	253.02	1107.31	-33.64	-172.82	175.36	6.99	36	34	21.967	108	4	31.289	
1156.00	37.33	253.03	1116.10	-35.57	-179.14	181.97	7.27	36	34	21.948	108	4	31.366	
1187.00	38.75	252.76	1140.52	-41.19	-197.40	201.07	4.61	36	34	21.893	108	4	31.590	
1217.00	40.13	252.26	1163.68	-46.92	-215.57	220.12	4.72	36	34	21.836	108	4	31.813	
1248.00	42.06	252.26	1187.04	-53.13	-234.98	240.49	6.23	36	34	21.775	108	4	32.051	
1279.00	44.06	252.26	1209.69	-59.58	-255.14	261.64	6.45	36	34	21.711	108	4	32.298	
1309.00	45.81	252.64	1230.93	-65.96	-275.34	282.83	5.90	36	34	21.648	108	4	32.546	
1339.00	47.81	253.26	1251.46	-72.37	-296.25	304.69	6.83	36	34	21.584	108	4	32.802	
1370.00	49.63	253.76	1271.91	-78.99	-318.59	327.99	5.99	36	34	21.519	108	4	33.076	
1401.00	51.20	254.11	1291.67	-85.60	-341.55	351.88	5.14	36	34	21.454	108	4	33.357	
1432.00	52.13	254.14	1310.89	-92.25	-364.93	376.19	3.00	36	34	21.388	108	4	33.644	
1463.00	53.13	254.76	1329.71	-98.85	-388.67	400.83	3.60	36	34	21.322	108	4	33.935	
1493.00	55.00	255.14	1347.31	-105.16	-412.13	425.11	6.32	36	34	21.260	108	4	34.223	
1524.00	57.06	255.01	1364.64	-111.78	-436.97	450.82	6.65	36	34	21.195	108	4	34.527	
1555.00	59.33	255.11	1380.97	-118.57	-462.42	477.15	7.33	36	34	21.127	108	4	34.839	
1586.00	60.56	255.01	1396.50	-125.49	-488.34	503.98	3.98	36	34	21.059	108	4	35.157	
1617.00	61.94	254.64	1411.41	-132.60	-514.57	531.15	4.57	36	34	20.989	108	4	35.479	
1648.00	62.94	254.39	1425.75	-139.94	-541.06	558.63	3.30	36	34	20.916	108	4	35.803	
1679.00	64.06	253.89	1439.58	-147.52	-567.74	586.38	3.89	36	34	20.841	108	4	36.131	
1710.00	65.87	254.05	1452.70	-155.28	-594.74	614.46	5.86	36	34	20.764	108	4	36.462	
1741.00	68.50	254.14	1464.72	-163.11	-622.22	643.03	8.49	36	34	20.687	108	4	36.798	
1773.00	70.81	254.26	1475.84	-171.28	-651.08	673.04	7.23	36	34	20.606	108	4	37.152	
1804.00	72.88	254.26	1485.50	-179.27	-679.44	702.49	6.68	36	34	20.527	108	4	37.500	
1835.00	74.75	253.89	1494.14	-187.43	-708.06	732.26	6.14	36	34	20.446	108	4	37.851	
1867.00	76.17	254.01	1502.18	-196.00	-737.83	763.23	4.45	36	34	20.362	108	4	38.216	
1898.00	77.50	254.26	1509.24	-204.25	-766.86	793.42	4.36	36	34	20.280	108	4	38.572	
1930.00	79.06	254.01	1515.74	-212.82	-797.00	824.75	4.93	36	34	20.195	108	4	38.941	
1962.00	80.44	253.64	1521.43	-221.59	-827.25	856.24	4.46	36	34	20.109	108	4	39.312	
1993.00	81.85	253.83	1526.20	-230.17	-856.65	886.87	4.59	36	34	20.024	108	4	39.673	
2024.00	83.13	253.76	1530.26	-238.74	-886.16	917.60	4.14	36	34	19.939	108	4	40.034	
2056.00	83.75	253.76	1533.91	-247.63	-916.68	949.39	1.94	36	34	19.851	108	4	40.409	
2087.00	84.20	253.90	1537.16	-256.22	-946.29	980.22	1.52	36	34	19.766	108	4	40.772	
2119.00	85.96	254.10	1539.91	-265.01	-976.94	1012.10	5.54	36	34	19.679	108	4	41.147	
2150.00	88.99	254.17	1541.27	-273.47	-1006.72	1043.07	9.78	36	34	19.595	108	4	41.512	
2182.00	90.17	253.60	1541.51	-282.35	-1037.47	1075.07	4.10	36	34	19.508	108	4	41.889	
2213.00	90.81	253.14	1541.24	-291.22	-1067.17	1106.06	2.54	36	34	19.420	108	4	42.253	
2244.00	91.44	252.76	1540.64	-300.31	-1096.80	1137.05	2.37	36	34	19.330	108	4	42.617	
2276.00	90.50	252.89	1540.09	-309.76	-1127.37	1169.04	2.97	36	34	19.237	108	4	42.991	
2307.00	89.44	252.89	1540.11	-318.88	-1157.00	1200.04	3.42	36	34	19.146	108	4	43.355	
2322.00	89.03	252.97	1540.31	-323.28	-1171.33	1215.03	2.78	36	34	19.103	108	4	43.530	
2344.00	88.28	253.47	1540.83	-329.63	-1192.39	1237.03	4.10	36	34	19.040	108	4	43.789	
2375.00	87.75	254.26	1541.90	-338.24	-1222.15	1268.01	3.07	36	34	18.955	108	4	44.154	
2406.00	87.88	254.26	1543.08	-346.65	-1251.97	1298.98	0.42	36	34	18.872	108	4	44.519	
2437.00	87.56	253.39	1544.32	-355.27	-1281.72	1329.96	2.99	36	34	18.786	108	4	44.884	
2467.00	87.38	253.39	1545.64	-363.84	-1310.44	1359.93	0.60	36	34	18.702	108	4	45.236	
2497.00	87.41	253.41	1547.00	-372.40	-1339.16	1389.90	0.12	36	34	18.617	108	4	45.588	
2528.00	88.44	253.64	1548.13	-381.19	-1368.86	1420.88	3.40	36	34	18.530	108	4	45.952	
2558.00	89.75	253.51	1548.60	-389.67	-1397.64	1450.87	4.39	36	34	18.446	108	4	46.305	



Weatherford International Ltd.

WFT Survey Report Lat, Long

**Weatherford**

Company: XTO Date: 7/20/2011 Time: 07:01:48 Page: 3
Field: San Juan, NM (NAD 83) Co-ordinate(NE) Reference: Well: HB McGrady A #1H, True North
Site: HB McGrady A#1H Vertical (TVD) Reference: SITE 6023.0
Well: HB McGrady A #1H Section (VS) Reference: Well (0.00N,0.00E,253 86Azi)
Wellpath: 1 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
2589.00	90.66	253.07	1548.49	-398.58	-1427.33	1481.87	3.26	36	34	18.358	108	4	46.669	
2620.00	91.06	253.01	1548.02	-407.63	-1456.97	1512.86	1.30	36	34	18.269	108	4	47.032	
2651.00	91.94	252.26	1547.21	-416.87	-1486.55	1543.84	3.73	36	34	18.177	108	4	47.395	
2681.00	92.06	251.51	1546.17	-426.20	-1515.05	1573.81	2.53	36	34	18.085	108	4	47.744	
2712.00	90.44	250.64	1545.49	-436.25	-1544.36	1604.76	5.93	36	34	17.986	108	4	48.104	
2744.00	88.69	251.26	1545.73	-446.69	-1574.61	1636.72	5.80	36	34	17.882	108	4	48.475	
2773.00	87.52	251.35	1546.69	-455.98	-1602.06	1665.67	4.05	36	34	17.790	108	4	48.811	
2803.00	87.75	251.39	1547.93	-465.56	-1630.47	1695.62	0.78	36	34	17.696	108	4	49.159	
2835.00	87.63	251.26	1549.22	-475.80	-1660.76	1727.56	0.55	36	34	17.594	108	4	49.531	
2864.00	88.38	250.89	1550.23	-485.20	-1688.17	1756.51	2.88	36	34	17.501	108	4	49.867	
2895.00	89.00	251.51	1550.94	-495.18	-1717.51	1787.47	2.83	36	34	17.403	108	4	50.226	
2925.00	90.69	251.76	1551.02	-504.63	-1745.98	1817.44	5.69	36	34	17.309	108	4	50.575	
2957.00	90.94	251.89	1550.56	-514.62	-1776.38	1849.42	0.88	36	34	17.210	108	4	50.948	
2987.00	91.50	251.89	1549.92	-523.94	-1804.89	1879.40	1.87	36	34	17.118	108	4	51.298	
3018.00	91.63	251.64	1549.08	-533.63	-1834.32	1910.36	0.91	36	34	17.022	108	4	51.659	
3049.00	91.56	251.51	1548.21	-543.43	-1863.72	1941.33	0.48	36	34	16.925	108	4	52.019	
3080.00	91.50	251.39	1547.39	-553.29	-1893.10	1972.29	0.43	36	34	16.828	108	4	52.379	
3111.00	91.31	251.51	1546.63	-563.15	-1922.48	2003.25	0.72	36	34	16.730	108	4	52.739	
3143.00	91.19	251.26	1545.93	-573.36	-1952.80	2035.21	0.87	36	34	16.629	108	4	53.111	
3175.00	91.88	251.46	1545.07	-583.58	-1983.11	2067.17	2.24	36	34	16.528	108	4	53.483	
3200.00	92.06	250.92	1544.21	-591.64	-2006.76	2092.13	2.28	36	34	16.449	108	4	53.773	
3231.00	92.06	251.89	1543.10	-601.52	-2036.12	2123.08	3.13	36	34	16.351	108	4	54.133	
3262.00	93.00	252.64	1541.73	-610.95	-2065.62	2154.04	3.88	36	34	16.258	108	4	54.494	
3292.00	93.94	254.14	1539.91	-619.51	-2094.31	2183.98	5.89	36	34	16.173	108	4	54.846	
3323.00	94.44	254.39	1537.65	-627.90	-2124.07	2214.90	1.80	36	34	16.090	108	4	55.211	
3353.00	94.25	254.01	1535.38	-636.04	-2152.85	2244.81	1.41	36	34	16.009	108	4	55.564	
3379.00	94.09	253.61	1533.48	-643.27	-2177.76	2270.74	1.65	36	34	15.938	108	4	55.869	
3415.00	93.19	253.51	1531.20	-653.44	-2212.22	2306.67	2.52	36	34	15.837	108	4	56.291	
3442.00	92.56	253.76	1529.85	-661.04	-2238.09	2333.63	2.51	36	34	15.762	108	4	56.609	
3476.00	91.69	253.76	1528.58	-670.54	-2270.71	2367.61	2.56	36	34	15.668	108	4	57.008	
3504.00	91.75	253.89	1527.74	-678.33	-2297.59	2395.60	0.51	36	34	15.591	108	4	57.338	
3527.00	90.94	253.89	1527.20	-684.71	-2319.68	2418.59	3.52	36	34	15.528	108	4	57.609	
3558.00	90.13	254.51	1526.91	-693.16	-2349.51	2449.59	3.29	36	34	15.445	108	4	57.974	
3589.00	89.69	254.64	1526.96	-701.40	-2379.39	2480.59	1.48	36	34	15.363	108	4	58.341	
3619.00	90.13	254.64	1527.01	-709.35	-2408.32	2510.58	1.47	36	34	15.284	108	4	58.695	
3649.00	90.06	254.64	1526.96	-717.29	-2437.25	2540.58	0.23	36	34	15.206	108	4	59.050	
3680.00	88.69	255.14	1527.30	-725.37	-2467.17	2571.57	4.70	36	34	15.126	108	4	59.417	
3711.00	88.55	255.59	1528.05	-733.20	-2497.16	2602.55	1.52	36	34	15.048	108	4	59.785	
3741.00	88.81	255.39	1528.74	-740.72	-2526.19	2632.53	1.09	36	34	14.974	108	5	0.141	
3772.00	89.25	255.39	1529.26	-748.54	-2556.19	2663.52	1.42	36	34	14.897	108	5	0.508	
3802.00	88.98	255.17	1529.72	-756.16	-2585.20	2693.50	1.16	36	34	14.821	108	5	0.864	
3833.00	87.44	255.76	1530.69	-763.93	-2615.19	2724.48	5.32	36	34	14.744	108	5	1.232	
3864.00	86.00	256.14	1532.47	-771.45	-2645.21	2755.40	4.80	36	34	14.670	108	5	1.600	
3894.00	85.25	255.14	1534.76	-778.87	-2674.19	2785.30	4.16	36	34	14.597	108	5	1.955	
3925.00	86.00	254.64	1537.12	-786.92	-2704.03	2816.21	2.91	36	34	14.517	108	5	2.321	
3956.00	86.69	254.26	1539.10	-795.22	-2733.84	2847.14	2.54	36	34	14.435	108	5	2.686	
3987.00	87.99	254.32	1540.53	-803.60	-2763.64	2878.11	4.20	36	34	14.352	108	5	3.052	
4017.00	89.56	254.64	1541.18	-811.63	-2792.54	2908.10	5.34	36	34	14.273	108	5	3.406	
4048.00	90.44	254.76	1541.18	-819.81	-2822.44	2939.09	2.86	36	34	14.192	108	5	3.772	
4078.00	90.56	254.88	1540.91	-827.66	-2851.40	2969.09	0.57	36	34	14.114	108	5	4.127	
4109.00	90.81	255.13	1540.54	-835.68	-2881.34	3000.08	1.14	36	34	14.035	108	5	4.494	
4139.00	90.50	255.51	1540.20	-843.28	-2910.36	3030.07	1.63	36	34	13.959	108	5	4.850	
4171.00	90.13	255.39	1540.02	-851.32	-2941.33	3062.05	1.22	36	34	13.880	108	5	5.230	



Weatherford International Ltd.

WFT Survey Report Lat, Long

**Weatherford**

Company: XTO Date: 7/20/2011 Time: 07:01:48 Page: 4
Field: San Juan, NM (NAD 83) Co-ordinate(NE) Reference: Well: HB McGrady A #1H, True North
Site: HB McGrady A#1H Vertical (TVD) Reference: SITE 6023.0
Well: HB McGrady A #1H Section (VS) Reference: Well (0.00N,0.00E,253.86Azi)
Wellpath: 1 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
4203.00	88.41	255.08	1540.43	-859.48	-2972.27	3094.04	5.46	36	34	13.799	108	5	5.609	
4230.00	87.81	255.81	1541.32	-866.26	-2998.39	3121.02	3.50	36	34	13.732	108	5	5.929	
4262.00	87.56	256.14	1542.62	-874.01	-3029.41	3152.97	1.29	36	34	13.655	108	5	6.310	
4292.00	87.94	256.14	1543.79	-881.19	-3058.51	3182.92	1.27	36	34	13.584	108	5	6.666	
4323.00	88.31	256.76	1544.81	-888.45	-3088.63	3213.87	2.33	36	34	13.513	108	5	7.036	
4354.00	89.25	255.14	1545.47	-895.97	-3118.70	3244.84	6.04	36	34	13.438	108	5	7.404	
4384.00	90.56	254.92	1545.52	-903.72	-3147.68	3274.84	4.43	36	34	13.361	108	5	7.760	
4416.00	91.38	253.89	1544.98	-912.32	-3178.50	3306.83	4.11	36	34	13.276	108	5	8.137	
4448.00	91.56	253.89	1544.15	-921.20	-3209.23	3338.82	0.56	36	34	13.189	108	5	8.514	
4480.00	91.63	253.91	1543.26	-930.07	-3239.96	3370.81	0.23	36	34	13.101	108	5	8.891	
4524.00	92.46	254.12	1541.69	-942.18	-3282.23	3414.78	1.95	36	34	12.981	108	5	9.409	
4555.00	92.88	253.76	1540.25	-950.75	-3311.99	3445.74	1.78	36	34	12.896	108	5	9.774	
4585.00	93.88	253.38	1538.48	-959.22	-3340.72	3475.69	3.57	36	34	12.812	108	5	10.126	
4615.00	94.19	253.26	1536.37	-967.81	-3369.38	3505.62	1.11	36	34	12.728	108	5	10.478	
4646.00	92.88	253.26	1534.46	-976.72	-3399.01	3536.55	4.23	36	34	12.639	108	5	10.841	
4674.00	90.86	254.09	1533.55	-984.58	-3425.87	3564.54	7.80	36	34	12.562	108	5	11.170	Last Wft Svy
4721.00	90.86	254.09	1532.84	-997.47	-3471.06	3611.53	0.00	36	34	12.434	108	5	11.724	Proj. To Bit

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
300.00	300.00	9.625	12.250	9 5/8"
2344.00	1540.83	7.000	8.500	7"

Annotation

MD ft	TVD ft	
345.00	345.00	First Wft Svy
4674.00	1533.55	Last Wft Svy
4721.00	1532.84	Proj To Bit

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
385.01	385.00	Ojo Alamo SS		0.00	0.00
509.00	508.99	Kirtland Shale		0.00	0.00
1089.86	1062.00	Fruitland Formation		0.00	0.00
1584.99	1396.00	Upper Fruitland Coal		0.00	0.00
2314.52	1540.20	Lower Fruitland Coal		-0.75	253.00
2819.61	1548.59	Base of Lower Coal		-0.75	253.00