

Results of Directional Survey

API number:	30-025-29435		
OGRID:		Operator:	XTO ENERGY INC
		Property:	NORTH VAVUUM ABO UNIT # 291

surface

ULSTR:	I	22	T 17S	R 34E
		1967	FSL	515
				FEL

BH Loc

ULSTR:	O	22	T 17S	R 34E
		900	FSL	2360
				FEL

	MD	N/S	E/W	VD
	8400	-50.95	47.97	8399.34
TOP PERFS/OH	8432	-51.38	47.45	8431.33
	8450	-51.62	47.16	8449.32
	10653	-1042.56	-1801.16	8710.09
BOT PERFS/OH	10704	-1067.43	-1845.43	8711.16
	10704	-1067.43	-1845.43	8711.16

NEXT TO LAST	10653	-1042.56	-1801.16	8710.09
LAST READING	10704	-1067.43	-1845.43	8711.16
TD	10704	-1067.43	-1845.43	8711.16

Surface Location	1967	FS	515	FE
Projected BHL	900	FS	2360	FE
Location of				
Top Perfs/OH	1916	FS	468	FE
Bottom Perfs/OH	900	FS	2360	FE

SUMMARY of Subsurface Locations

Surface Location	I-22-17S-34E	1967	FS	515	FE	Vert. Depth
Top Perfs/OH	I-22-17S-34E	1916	FS	468	FE	8431.33
Bottom Perfs/OH	O-22-17S-34E	900	FS	2360	FE	8711.16
Projected TD	O-22-17S-34E	900	FS	2360	FE	8711.16

ACTUAL WELLPATH REPORT (CSV version)

Prepared by Baker Hughes INTEQ
Software System: WellArchitect™1.2

REFERENCE WELLPATH IDENTIFICATION

Operator XTO Energy Inc.
Area Lea County, NM
Field North Vacuum Abo
Facility NVAU #291H
Slot #291H BHL
Well #291H
Wellbore #291 AWB ST01 (Lateral)
Wellpath #291 AWP ST01 (Lateral)
Sidetrack #291H AWP OH at 8400.00 MD

SUR: I-22-17s-34e, 1967/S & 515/E
BHL: O-22-17s-34e, 900/S & 2360/E
API #30-025-29435

REPORT SETUP INFORMATION

Projection: NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet
North Refe Grid
Scale 0.999977
Wellbore L 9/4/2007
Software S WellArchitect™
User Gomeoscr
Report Gen 10/12/07 at 10:43:29
DataBase: WA_Midland/ev01.xml

WELLPAT	Local North	Local East	Grid East	Grid North	Latitude	Longitude
	[ft]	[ft]	[ft]	[ft]	[°]	[°]
Slot Location	0	0	743418.1	662369.3	32 49 06.3	103 32 27.572W
Facility Ref			743418.1	662369.3	32 49 06.3	103 32 27.572W
Field Refer			743305.8	659615.2	32 48 39.1	103 32 29.129W

WELLPATH DATUM

Calculation Minimum curvature
Horizontal Facility Center
Vertical Re Rig on #291H BHL (RT)
MD Refere Rig on #291H BHL (RT)
Field Vertical GRN. ELEV.
Rig on #29 17 00 feet
Rig on #29 4051 00 feet
Facility Vertical 0.00 feet
Section Or 0.00 feet
Section Or 0.00 feet
Section Az 241.00°

WELLPATH DATA Wellbore: #291 AWB ST01 (Lateral) Wellpath: #291 AWP ST01 (Lateral) † = interpolated/extrapolated station

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	DLS	Tgt#
feet	deg	deg	feet	feet	feet	feet	us survey feet	us survey feet	deg/100ft	
0	0	0	0	0	0	0	743418.1	662369.3	0	
100	0.07	226.84	100	0.06	-0.04	-0.04	743418.06	662369.26	0.07	
200	0.06	230.24	200	0.17	-0.12	-0.13	743417.97	662369.18	0.01	
300	0.34	206.27	300	0.47	-0.42	-0.3	743417.8	662368.88	0.29	
400	0.47	190.3	400	0.97	-1.09	-0.51	743417.59	662368.21	0.17	
500	0.57	182.29	499.99	1.49	-1.99	-0.6	743417.5	662367.31	0.12	
600	0.6	172.46	599.99	1.94	-3	-0.55	743417.55	662366.3	0.1	
700	0.56	172.39	699.98	2.31	-4.01	-0.42	743417.68	662365.29	0.04	
800	0.68	175.8	799.98	2.73	-5.08	-0.31	743417.79	662364.22	0.13	
900	0.68	169.14	899.97	3.17	-6.26	-0.15	743417.95	662363.04	0.08	
1000	0.71	170.15	999.96	3.56	-7.45	0.06	743418.16	662361.85	0.03	
1100	0.65	161.73	1099.96	3.86	-8.6	0.35	743418.45	662360.7	0.12	
1200	0.6	153.66	1199.95	3.99	-9.61	0.76	743418.86	662359.69	0.1	
1300	0.7	152.64	1299.94	4.04	-10.62	1.27	743419.37	662358.68	0.1	
1400	0.66	158.62	1399.94	4.13	-11.7	1.76	743419.86	662357.6	0.08	
1500	0.59	156.41	1499.93	4.25	-12.71	2.18	743420.28	662356.59	0.07	
1600	0.44	165.54	1599.93	4.4	-13.55	2.48	743420.58	662355.75	0.17	
1700	0.19	195.32	1699.92	4.61	-14.08	2.53	743420.63	662355.22	0.29	
1800	0.09	236.09	1799.92	4.81	-14.28	2.42	743420.52	662355.02	0.14	
1900	0.06	254.97	1899.92	4.94	-14.34	2.31	743420.41	662354.96	0.04	
2000	0.25	334.33	1999.92	4.97	-14.16	2.16	743420.26	662355.14	0.25	
2100	0.48	11.86	2099.92	4.69	-13.55	2.15	743420.25	662355.75	0.32	

2200	0.46	9.18	2199.92	4.16	-12.75	2.3	743420.4	662356.55	0.03
2300	0.51	8.91	2199.91	3.64	-11.91	2.44	743420.54	662357.39	0.05
2400	0.58	29.02	2399.91	2.94	-11.03	2.75	743420.85	662358.27	0.2
2500	0.73	34.04	2499.9	1.94	-10.06	3.35	743421.45	662359.24	0.16
2600	0.79	26.16	2599.89	0.81	-8.91	4.01	743422.11	662360.39	0.12
2700	0.82	25.98	2699.88	-0.34	-7.65	4.63	743422.73	662361.65	0.03
2800	0.97	23.33	2799.87	-1.6	-6.23	5.28	743423.38	662363.07	0.16
2900	0.77	38.19	2899.86	-2.89	-4.92	6.03	743424.13	662364.38	0.3
3000	0.59	51.45	2999.85	-4.01	-4.07	6.85	743424.95	662365.23	0.24
3100	0.58	51.24	3099.85	-5.02	-3.44	7.65	743425.75	662365.86	0.01
3200	0.55	59.92	3199.84	-6	-2.88	8.46	743426.56	662366.42	0.09
3300	0.52	64.35	3299.84	-6.93	-2.44	9.28	743427.38	662366.86	0.05
3400	0.49	82.78	3399.84	-7.78	-2.19	10.11	743428.21	662367.11	0.16
3500	0.35	90.86	3499.83	-8.45	-2.14	10.84	743428.94	662367.16	0.15
3600	0.48	100.17	3599.83	-9.03	-2.22	11.56	743429.66	662367.08	0.15
3700	0.41	143.23	3699.83	-9.41	-2.58	12.19	743430.29	662366.72	0.33
3800	0.48	132.68	3799.82	-9.59	-3.15	12.71	743430.81	662366.15	0.11
3900	0.66	131.74	3899.82	-9.91	-3.82	13.45	743431.55	662365.48	0.18
4000	0.76	134.56	3999.81	-10.29	-4.67	14.35	743432.45	662364.63	0.11
4100	0.78	132.26	4099.8	-10.69	-5.59	15.33	743433.43	662363.71	0.04
4200	1.06	139.21	4199.79	-11.1	-6.75	16.43	743434.53	662362.55	0.3
4300	0.93	162.89	4299.78	-11.12	-8.23	17.28	743435.38	662361.07	0.43
4400	0.95	160.57	4399.76	-10.82	-9.78	17.79	743435.89	662359.52	0.04
4500	1.04	155.86	4499.75	-10.6	-11.39	18.44	743436.54	662357.91	0.12
4600	0.93	160.71	4599.73	-10.39	-12.99	19.08	743437.18	662356.31	0.14
4700	0.84	164.18	4699.72	-10.09	-14.46	19.55	743437.65	662354.84	0.1
4800	0.76	156.29	4799.71	-9.86	-15.77	20.01	743438.11	662353.53	0.14
4900	0.94	172	4899.7	-9.5	-17.19	20.39	743438.49	662352.11	0.29
5000	0.98	133.54	4999.69	-9.46	-18.59	21.13	743439.23	662350.71	0.63
5100	0.95	128.4	5099.67	-10.04	-19.7	22.4	743440.5	662349.6	0.09
5200	0.83	133.45	5199.66	-10.58	-20.71	23.57	743441.67	662348.59	0.14
5300	0.7	175.95	5299.65	-10.54	-21.82	24.14	743442.24	662347.48	0.57
5400	0.67	166.26	5399.65	-10.13	-22.99	24.32	743442.42	662346.31	0.12
5500	0.76	159.11	5499.64	-9.88	-24.18	24.7	743442.8	662345.12	0.13
5600	0.86	156.12	5599.63	-9.72	-25.49	25.24	743443.34	662343.81	0.11
5700	0.92	162.91	5699.62	-9.48	-26.94	25.78	743443.88	662342.36	0.12
5800	0.81	157.59	5799.6	-9.24	-28.36	26.28	743444.38	662340.94	0.14
5900	0.78	156.63	5899.59	-9.09	-29.64	26.82	743444.92	662339.66	0.03
6000	0.86	172.64	5999.58	-8.75	-31.01	27.19	743445.29	662338.29	0.24
6100	0.95	174.3	6099.57	-8.14	-32.58	27.37	743445.47	662336.72	0.09
6200	0.98	179.99	6199.56	-7.4	-34.26	27.45	743445.55	662335.04	0.1
6300	0.92	174.09	6299.54	-6.67	-35.91	27.53	743445.63	662333.39	0.11
6400	0.94	159.46	6399.53	-6.23	-37.48	27.9	743446	662331.82	0.24
6500	0.94	165.7	6499.52	-5.91	-39.04	28.39	743446.49	662330.26	0.1
6600	0.88	165.12	6599.5	-5.51	-40.58	28.79	743446.89	662328.72	0.06
6700	0.78	175.57	6699.49	-5.04	-42	29.04	743447.14	662327.3	0.18
6800	0.4	125.41	6799.49	-4.91	-42.88	29.38	743447.48	662326.42	0.61
6900	0.48	142.68	6899.49	-5.12	-43.42	29.92	743448.02	662325.89	0.15
7000	0.73	133.3	6999.48	-5.37	-44.19	30.64	743448.74	662325.12	0.27
7100	0.81	137.07	7099.47	-5.74	-45.14	31.58	743449.68	662324.16	0.09
7200	0.69	116.98	7199.46	-6.24	-45.93	32.6	743450.7	662323.37	0.29
7300	0.66	99.84	7299.46	-7.03	-46.3	33.7	743451.8	662323	0.2
7400	0.48	88.25	7399.45	-7.85	-46.39	34.69	743452.79	662322.91	0.21
7500	0.43	101.45	7499.45	-8.51	-46.45	35.48	743453.58	662322.85	0.12
7600	0.63	115.12	7599.44	-9.12	-46.76	36.34	743454.44	662322.54	0.24
7700	0.64	112.12	7699.44	-9.79	-47.2	37.36	743455.46	662322.1	0.03
7800	0.66	132.74	7799.43	-10.32	-47.8	38.3	743456.4	662321.5	0.23
7900	0.77	114.67	7899.42	-10.9	-48.47	39.33	743457.43	662320.83	0.25
8000	0.86	115.29	7999.41	-11.73	-49.07	40.62	743458.72	662320.23	0.09
8100	1.01	110.94	8099.4	-12.74	-49.71	42.12	743460.22	662319.59	0.17
8200	1.2	99.12	8199.38	-14.13	-50.19	43.98	743462.08	662319.11	0.3
8300	1.15	102.89	8299.36	-15.7	-50.58	45.99	743464.09	662318.72	0.09
8400	1.16	98.27	8399.34	-17.25	-50.95	47.97	743466.07	662318.35	0.09
8450	3.3	245.3	8449.32	-16.22	-51.62	47.16	743465.26	662317.68	8.64
8467	8.5	245.3	8466.22	-14.48	-52.35	45.58	743463.68	662316.95	30.59
8482	14	245.3	8480.93	-11.56	-53.58	42.92	743461.02	662315.72	36.67
8499	19.7	249.5	8497.19	-6.67	-55.44	38.36	743456.46	662313.86	34.26
8514	25.1	249.2	8511.06	-1.02	-57.46	33.02	743451.12	662311.84	36.01
8531	31.1	248.5	8526.04	6.91	-60.35	25.55	743443.65	662308.95	35.35
8546	35.1	247.1	8538.61	15.04	-63.45	17.97	743436.07	662305.85	27.15

8561	40.7	246	8550.44	24.21	-67.12	9.53	742127.63	662302.18	37.6
8575	44.3	246.7	8560.76	33.62	-70.91	0.86	742128.96	662298.39	25.93
8591	48.1	246.7	8571.83	45.11	-75.48	-9.74	743408.36	662293.82	23.75
8606	51.5	246	8581.51	56.52	-80.08	-20.23	743397.87	662289.23	22.94
8623	55	245.3	8591.68	70.09	-85.69	-32.64	743385.46	662283.61	20.85
8655	58.8	245	8609.15	96.82	-96.96	-56.96	743361.14	662272.35	11.9
8687	63.7	244.6	8624.54	124.81	-108.9	-82.34	743335.77	662260.4	15.35
8719	67.6	243.6	8637.73	153.91	-121.64	-108.55	743309.55	662247.67	12.52
8751	71.7	243.6	8648.86	183.88	-134.97	-135.42	743282.68	662234.33	12.81
8784	77.2	243.9	8657.7	215.62	-149.03	-163.92	743254.18	662220.28	16.69
8816	83.9	244.3	8662.95	247.12	-162.81	-192.3	743225.8	662206.5	20.97
8844	89.7	246.7	8664.52	274.98	-174.39	-217.73	743200.37	662194.91	22.41
8876	88.5	245	8665.02	306.86	-187.48	-246.93	743171.18	662181.82	6.5
8907	88.5	245	8665.83	337.77	-200.58	-275.01	743143.1	662168.73	0
8939	88.1	245	8666.78	369.68	-214.1	-304	743114.11	662155.21	1.25
8971	87.9	244.6	8667.9	401.59	-227.71	-332.94	743085.17	662141.59	1.4
9002	88.3	243.2	8668.92	432.53	-241.34	-360.76	743057.35	662127.96	4.69
9034	88.3	242.9	8669.87	464.5	-255.84	-389.27	743028.84	662113.47	0.94
9066	89.4	242.9	8670.52	496.48	-270.42	-417.75	743000.36	662098.89	3.44
9098	89.5	242.2	8670.82	528.46	-285.17	-446.15	742971.96	662084.14	2.21
9130	88.7	240.8	8671.33	560.46	-300.43	-474.27	742943.85	662068.88	5.04
9162	87.6	239.3	8672.36	592.43	-316.4	-501.98	742916.14	662052.91	5.81
9194	87.9	240.1	8673.61	624.4	-332.53	-529.58	742888.53	662036.78	2.67
9225	88.2	240.4	8674.67	655.38	-347.91	-556.48	742861.63	662021.4	1.37
9257	89.7	240.4	8675.26	687.37	-363.71	-584.3	742833.81	662005.6	4.69
9289	90.1	240.1	8675.31	719.37	-379.59	-612.08	742806.03	661989.72	1.56
9321	90.3	239.7	8675.2	751.36	-395.64	-639.77	742778.35	661973.67	1.4
9353	90.8	239	8674.89	783.35	-411.95	-667.3	742750.82	661957.36	2.69
9385	91.1	237.9	8674.36	815.31	-428.69	-694.56	742723.56	661940.62	3.56
9417	91	237.9	8673.78	847.26	-445.69	-721.67	742696.45	661923.62	0.31
9449	91.1	236.5	8673.19	879.18	-463.02	-748.56	742669.56	661906.29	4.39
9481	91	236.5	8672.6	911.08	-480.68	-775.24	742642.88	661888.63	0.31
9510	91.2	236.2	8672.05	939.98	-496.75	-799.37	742618.75	661872.57	1.24
9541	88.5	238.3	8672.13	970.91	-513.52	-825.44	742592.68	661855.8	11.03
9573	88	237.9	8673.1	1002.85	-530.42	-852.6	742565.52	661838.9	2
9605	88	237.2	8674.22	1034.77	-547.58	-879.58	742538.54	661821.74	2.19
9636	87.7	237.2	8675.38	1065.68	-564.36	-905.62	742512.5	661804.96	0.97
9668	89.7	236.9	8676.11	1097.6	-581.76	-932.47	742485.66	661787.56	6.32
9700	89.6	235.8	8676.31	1129.49	-599.49	-959.1	742459.02	661769.83	3.45
9732	88	236.5	8676.98	1161.37	-617.31	-985.67	742432.45	661752.01	5.46
9764	87.9	236.5	8678.12	1193.25	-634.96	-1012.34	742405.78	661734.36	0.31
9796	88.4	238.6	8679.15	1225.17	-652.12	-1039.33	742378.8	661717.2	6.74
9828	88	241.1	8680.16	1257.15	-668.18	-1066.98	742351.14	661701.13	7.91
9859	87.6	243.2	8681.35	1288.12	-682.65	-1094.37	742323.76	661686.66	6.89
9891	87.1	242.5	8682.83	1320.07	-697.24	-1122.81	742295.31	661672.08	2.69
9923	87.2	241.8	8684.42	1352.02	-712.17	-1151.07	742267.06	661657.15	2.21
9955	87.5	241.1	8685.9	1383.98	-727.45	-1179.15	742238.98	661641.87	2.38
9987	87.7	241.5	8687.24	1415.96	-742.8	-1207.2	742210.94	661626.52	1.4
10019	87	240.8	8688.72	1447.92	-758.22	-1235.19	742182.94	661611.09	3.09
10051	88.6	241.1	8689.95	1479.9	-773.75	-1263.15	742154.99	661595.57	5.09
10083	88.5	242.9	8690.76	1511.88	-788.77	-1291.39	742126.74	661580.55	5.63
10115	87.1	243.9	8691.99	1543.83	-803.09	-1319.98	742098.15	661566.23	5.38
10144	86.9	243.6	8693.5	1572.75	-815.89	-1345.95	742072.18	661553.43	1.24
10175	86.5	242.9	8695.29	1603.68	-829.82	-1373.59	742044.54	661539.5	2.6
10207	86.3	242.9	8697.3	1635.6	-844.37	-1402.02	742016.11	661524.95	0.62
10238	86.9	244.6	8699.14	1666.51	-858.06	-1429.77	741988.36	661511.26	5.81
10269	86.7	244.3	8700.87	1697.4	-871.41	-1457.7	741960.44	661497.91	1.16
10302	86.4	243.2	8702.85	1730.3	-885.98	-1487.24	741930.9	661483.34	3.45
10334	88.1	243.9	8704.39	1762.23	-900.21	-1515.86	741902.28	661469.11	5.74
10366	89.5	245	8705.06	1794.17	-914.01	-1544.72	741873.42	661455.31	5.56
10398	89.4	245.3	8705.37	1826.08	-927.46	-1573.76	741844.38	661441.86	0.99
10430	89.3	245	8705.73	1857.99	-940.91	-1602.79	741815.35	661428.42	0.99
10462	88.9	244.6	8706.23	1889.92	-954.53	-1631.74	741786.4	661414.79	1.77
10493	88.3	242.9	8706.99	1920.87	-968.24	-1659.54	741758.6	661401.09	5.81
10525	88.9	242.9	8707.77	1952.85	-982.81	-1688.01	741730.13	661386.52	1.87
10557	89.8	243.9	8708.13	1984.82	-997.14	-1716.63	741701.52	661372.19	4.2
10589	88.3	241.8	8708.66	2016.79	-1011.73	-1745.09	741673.05	661357.59	8.06
10621	88.9	241.1	8709.45	2048.78	-1027.02	-1773.19	741644.95	661342.3	2.88
10653	88.8	240.8	8710.09	2080.77	-1042.56	-1801.16	741616.98	661326.77	0.99
10704	88.8	240.8	8711.16	2131.76	-1067.43	-1845.67	741572.48	661301.89	0

Name	MD feet	TVD feet	North feet	East feet	Grid East us survey f	Grid North us survey f	Latitude DegMinSec	Longitude DegMinSec	Shape	Comment
#291H 400' VS		8669	-244.01	-323.85	743094.3	662125.3	32 49 03.9	103 32 31.387W	point	
#291H BHL		8687	-985.02	-1776.94	741641.2	661384.3	32 48 56.7	103 32 48.478W	point	

Log Name/ Start MD	End MD	Pos Unc Model
feet	feet	

Gyro	0	8400 Generic gyro - northseeking (Standard)
MWD	8400	10704 NaviTrak (Standard)