

SYSDRILL  
Closest Approach + Clearance Factor Report  
Wellbore: PAVISTMA 10 #1-3-32-090-8-CH (PWB)  
Wellpath: PAVISTMA 10 #1-3-32-090-8-CH (PWP#1)



Ellipse separations are reported ONLY if BOTH wells have uncertainty data  
Only Depth and Magnetic Reference Field error terms are correlated across tie points  
Cutoff is calculated on CENTRE to CENTRE distance

Summary data uses Closest Approach clearance calculation for all minima  
Hole size/Casings ARE included  
Hole size/Casings are NOT subtracted from Centre-Centre distance  
Confidence limit of 95.00% / 2.80 SD.

#### Wellbore

Name	Created	Last Revised
PAVISTMA 10 #1-3-32-090-8-CH (PWB)	13-Nov-2012	26-Dec-2012

#### Well

Name	Government ID	Last Revised
PAVISTMA 10 #1-3-32-090-8-CH		13-Nov-2012

#### Slot

Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #10	1404450.3098	3160118.7426	N40 26 31.8917	W104 55 29.0160	128.26N	5.47W

#### Installation

Name	Easting	Northing	Coord System Name	North Alignment
Pavistma	3160124.2135	1404322.0586	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

#### Field

Name	Easting	Northing	Coord System Name	North Alignment
Windsor Project	3162710.0707	1407271.6545	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

#### Clearance Summary

Offset WellName	Offset Wellbore	Offset Slot	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
PAVISTMA 4-2-32	PAVISTMA 4-2-32 (AWB)	PAVISTMA 4-2-32	Pavistma	97.79	1128.49	8008.14	94.54	1144.89	5.33	7919.82

#### Reference Wellbore Survey Tool Program

Survey Name	MD[ft]	Survey Tool	Error Model
Planned	16986.70	WdW Rate Gyro	Standard

#### Clearance Data

Reference MD[ft]	Reference TVD[ft]	Reference North[ft]	Reference East[ft]	Offset Well	Offset MD[ft]	Offset TVD[ft]	Offset North[ft]	Offset East[ft]	Angle From Highside [deg]	Closest Approach Distance [ft]	Ellipse Separation [ft]	Clearance Factor
13.00	13.00	0.00N	0.00E	PAVISTMA 4-2-32	0.18	13.18	128.26S	5.47E	177.6	128.37	128.36	7712.54
113.00	113.00	0.00N	0.00E	PAVISTMA 4-2-32	100.53	113.52	128.07S	5.22E	177.7	128.18	127.70	267.84
213.00	213.00	0.00N	0.00E	PAVISTMA 4-2-32	200.89	213.88	127.57S	4.48E	178.0	127.65	126.95	182.83
216.49	216.49	0.00N	0.00E	PAVISTMA 4-2-32	203.50	216.49	127.55S	4.46E	178.0	127.63	126.93	181.21
313.00	313.00	0.00N	0.00E	PAVISTMA 4-2-32	301.89	314.87	126.46S	2.97E	178.7	126.51	125.65	148.54
413.00	413.00	0.00N	0.00E	PAVISTMA 4-2-32	402.52	415.48	124.69S	3.25E	178.5	124.76	123.76	124.93
421.95	421.95	0.00N	0.00E	PAVISTMA 4-2-32	409.00	421.95	124.56S	3.33E	178.5	124.60	123.59	122.91
513.00	513.00	0.00N	0.00E	PAVISTMA 4-2-32	503.60	516.45	122.09S	6.89E	176.8	122.33	121.18	105.68
613.00	613.00	0.00N	0.00E	PAVISTMA 4-2-32	604.41	616.98	118.39S	13.41E	173.5	119.21	117.87	88.54
713.00	713.00	0.00N	0.00E	PAVISTMA 4-2-32	705.14	717.25	113.49S	21.63E	169.2	115.62	114.03	72.75
813.00	813.00	0.00N	0.00E	PAVISTMA 4-2-32	806.98	818.48	107.04S	30.60E	164.1	111.47	109.58	59.15
913.00	913.00	0.00N	0.00E	PAVISTMA 4-2-32	908.34	918.97	97.71S	40.03E	157.7	105.76	103.52	47.32
1013.00	1013.00	0.00N	0.00E	PAVISTMA 4-2-32	1008.20	1017.77	87.15S	49.95E	150.2	100.56	97.92	38.08
1113.00	1112.98	1.59N	0.73W	PAVISTMA	1108.37	1116.53	74.44S	60.81E	165.7	97.87	94.77	31.51

All data is in Feet unless otherwise stated  
Coordinates are from Slot MD's are from Rig and TVD's are from Rig ( Planned Datum #1 4967.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 82.820 degrees  
Prepared by Peterson Energy  
Date Printed: 28-Jan-2013

SYSDRILL  
Closest Approach + Clearance Factor Report  
Wellbore: PAVISTMA 10 #1-3-32-090-8-CH (PWB)  
Wellpath: PAVISTMA 10 #1-3-32-090-8-CH (PWP#1)



**Clearance Data**

Reference MD[ft]	Reference TVD[ft]	Reference North[ft]	Reference East[ft]	Offset Well	Offset MD[ft]	Offset TVD[ft]	Offset North[ft]	Offset East[ft]	Angle From Highside [deg]	Closest Approach Distance [ft]	Ellipse Separation [ft]	Clearance Factor
1128.49	1128.45	2.12N	0.97W	4-2-32 PAVISTMA	1124.62	1132.51	72.07S	62.61E	164.1	97.79	94.59	30.62
1144.89	1144.84	2.76N	1.27W	4-2-32 PAVISTMA	1140.79	1148.40	69.67S	64.40E	162.5	97.83	94.54	29.79
1213.00	1212.84	6.34N	2.91W	4-2-32 PAVISTMA	1210.59	1216.90	58.40S	71.64E	155.6	98.82	95.18	27.14
1313.00	1312.45	14.26N	6.54W	4-2-32 PAVISTMA	1311.98	1316.07	39.41S	80.69E	146.2	102.49	98.31	24.50
1413.00	1411.70	25.34N	11.63W	4-2-32 PAVISTMA	1412.63	1413.97	17.34S	88.24E	137.6	108.63	103.88	22.85
1513.00	1510.47	39.56N	18.15W	4-2-32 PAVISTMA	1510.64	1508.55	7.01N	96.55E	129.9	119.24	113.89	22.28
1554.99	1551.77	46.46N	21.32W	4-2-32 PAVISTMA	1551.76	1548.00	17.95N	100.32E	127.1	124.99	119.35	22.17
1606.15	1601.92	55.61N	25.51W	4-2-32 PAVISTMA	1601.74	1595.80	31.76N	105.06E	124.0	132.88	126.92	22.30
1613.00	1608.62	56.89N	26.10W	4-2-32 PAVISTMA	1608.44	1602.20	33.63N	105.70E	123.6	134.00	127.99	22.33
1637.02	1632.13	61.38N	28.16W	4-2-32 PAVISTMA	1631.77	1624.44	40.31N	107.99E	122.3	137.99	131.80	22.32
1713.00	1706.49	75.58N	34.67W	4-2-32 PAVISTMA	1705.87	1695.00	61.72N	115.32E	118.6	151.07	144.35	22.49
1813.00	1804.35	94.26N	43.25W	4-2-32 PAVISTMA	1802.67	1786.96	90.27N	125.15E	114.4	169.34	161.91	22.78
1913.00	1902.22	112.95N	51.82W	4-2-32 PAVISTMA	1899.78	1878.95	119.65N	135.42E	110.8	188.79	180.64	23.16
2013.00	2000.08	131.63N	60.39W	4-2-32 PAVISTMA	1997.21	1970.96	149.96N	145.81E	107.6	209.05	200.19	23.59
2113.00	2097.95	150.32N	68.96W	4-2-32 PAVISTMA	2095.52	2063.91	180.29N	156.05E	105.0	229.53	219.94	23.93
2213.00	2195.81	169.00N	77.53W	4-2-32 PAVISTMA	2192.88	2156.36	209.09N	166.15E	103.2	250.09	239.78	24.26
2313.00	2293.67	187.69N	86.11W	4-2-32 PAVISTMA	2287.29	2246.16	236.34N	176.54E	101.8	271.30	260.29	24.63
2413.00	2391.54	206.37N	94.68W	4-2-32 PAVISTMA	2382.58	2336.35	264.82N	188.06E	100.5	293.94	282.23	25.10
2513.00	2489.40	225.06N	103.25W	4-2-32 PAVISTMA	2482.35	2430.80	294.77N	199.77E	99.3	316.41	303.96	25.42
2613.00	2587.27	243.74N	111.82W	4-2-32 PAVISTMA	2574.46	2517.86	322.84N	210.58E	98.2	339.15	326.00	25.80
2713.00	2685.13	262.43N	120.40W	4-2-32 PAVISTMA	2676.02	2613.56	354.45N	223.01E	97.1	362.65	348.75	26.09
2736.10	2707.73	266.74N	122.38W	4-2-32 PAVISTMA	2702.61	2638.74	362.48N	225.97E	96.8	367.79	353.69	26.09
2813.00	2782.99	281.11N	128.97W	4-2-32 PAVISTMA	2779.83	2712.13	385.13N	233.99E	96.3	384.16	369.49	26.19
2913.00	2880.86	299.79N	137.54W	4-2-32 PAVISTMA	2876.70	2804.40	412.83N	244.09E	95.7	405.29	389.90	26.34
3013.00	2978.72	318.48N	146.11W	4-2-32 PAVISTMA	2969.79	2892.78	440.22N	254.24E	95.2	427.19	411.11	26.57
3113.00	3076.59	337.16N	154.68W	4-2-32 PAVISTMA	3072.28	2990.12	470.20N	265.68E	94.6	449.31	432.48	26.69
3213.00	3174.45	355.85N	163.26W	4-2-32 PAVISTMA	3169.00	3082.64	496.26N	276.43E	94.5	470.60	453.05	26.81
3313.00	3272.32	374.53N	171.83W	4-2-32 PAVISTMA	3263.53	3173.04	521.54N	287.58E	94.3	492.46	474.21	26.98
3413.00	3370.18	393.22N	180.40W	4-2-32 PAVISTMA	3356.00	3260.95	547.97N	298.70E	94.0	515.19	496.26	27.21
3513.00	3468.04	411.90N	188.97W	4-2-32 PAVISTMA	3452.15	3351.78	577.36N	310.09E	93.6	538.48	518.81	27.38
3613.00	3565.91	430.59N	197.55W	4-2-32 PAVISTMA	3543.00	3437.37	605.82N	320.92E	93.1	562.17	541.82	27.63
3713.00	3663.77	449.27N	206.12W	4-2-32 PAVISTMA	3634.77	3523.67	634.56N	333.08E	92.7	587.10	566.06	27.90
3813.00	3761.64	467.96N	214.69W	4-2-32 PAVISTMA	3730.00	3613.16	664.43N	346.07E	92.3	612.45	590.68	28.13
3913.00	3859.50	486.64N	223.26W	4-2-32 PAVISTMA	3823.52	3700.43	695.66N	358.46E	91.8	638.28	615.77	28.36
4013.00	3957.36	505.33N	231.84W	4-2-32 PAVISTMA	3920.92	3790.31	731.22N	370.45E	90.9	664.59	641.34	28.58
4113.00	4055.23	524.01N	240.41W	4-2-32 PAVISTMA	4023.48	3884.81	769.34N	382.15E	90.1	690.51	666.47	28.73
4213.00	4153.09	542.70N	248.98W	4-2-32 PAVISTMA	4126.90	3981.05	805.32N	393.84E	89.5	715.39	690.56	28.81

All data is in Feet unless otherwise stated  
Coordinates are from Slot MD's are from Rig and TVD's are from Rig ( Planned Datum #1 4967.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 82.820 degrees  
Prepared by Peterson Energy  
Date Printed: 28-Jan-2013

SYSDRILL  
Closest Approach + Clearance Factor Report  
Wellbore: PAVISTMA 10 #1-3-32-090-8-CH (PWB)  
Wellpath: PAVISTMA 10 #1-3-32-090-8-CH (PWP#1)



**Clearance Data**

Reference MD[ft]	Reference TVD[ft]	Reference North[ft]	Reference East[ft]	Offset Well	Offset MD[ft]	Offset TVD[ft]	Offset North[ft]	Offset East[ft]	Angle From Highside [deg]	Closest Approach Distance [ft]	Ellipse Separation [ft]	Clearance Factor
4313.00	4250.96	561.38N	257.55W	4-2-32 PAVISTMA	4234.42	4082.21	839.51N	406.32E	89.1	739.29	713.64	28.82
4392.92	4329.17	576.31N	264.40W	4-2-32 PAVISTMA	4325.80	4169.01	866.17N	416.53E	89.0	757.19	730.86	28.76
4413.00	4348.82	580.07N	266.12W	4-2-32 PAVISTMA	4345.42	4187.73	871.67N	418.59E	89.0	761.46	734.98	28.76
4513.00	4446.69	598.75N	274.70W	4-2-32 PAVISTMA	4482.71	4320.09	905.69N	431.40E	89.2	780.26	752.85	28.47
4613.00	4544.55	617.44N	283.27W	4-2-32 PAVISTMA	4597.28	4432.12	927.77N	440.61E	89.7	795.58	767.41	28.24
4713.00	4642.41	636.12N	291.84W	4-2-32 PAVISTMA	4737.04	4570.16	947.47N	449.78E	90.8	807.56	778.58	27.87
4813.00	4740.28	654.81N	300.41W	4-2-32 PAVISTMA	4864.37	4696.82	959.31N	454.93E	92.0	815.57	785.90	27.48
4913.00	4838.14	673.49N	308.99W	4-2-32 PAVISTMA	4973.50	4805.72	965.74N	457.77E	93.2	821.21	790.90	27.10
5013.00	4936.01	692.17N	317.56W	4-2-32 PAVISTMA	5091.78	4923.92	969.67N	459.41E	94.7	825.12	794.22	26.70
5113.00	5033.87	710.86N	326.13W	4-2-32 PAVISTMA	5198.45	5030.57	971.20N	459.72E	96.1	827.86	796.38	26.30
5213.00	5131.74	729.54N	334.70W	4-2-32 PAVISTMA	5301.51	5133.63	971.69N	459.68E	97.6	830.48	798.45	25.93
5213.13	5131.86	729.57N	334.71W	4-2-32 PAVISTMA	5301.64	5133.76	971.69N	459.68E	97.6	830.48	798.45	25.93
5313.00	5229.60	748.23N	343.27W	4-2-32 PAVISTMA	5400.30	5232.42	972.15N	459.26E	98.9	833.19	800.63	25.58
5413.00	5327.46	766.91N	351.85W	4-2-32 PAVISTMA	5499.38	5331.49	972.62N	458.75E	100.2	836.30	803.21	25.27
5513.00	5425.33	785.60N	360.42W	4-2-32 PAVISTMA	5602.27	5434.38	972.90N	457.93E	101.6	839.56	805.97	24.99
5613.00	5523.19	804.28N	368.99W	4-2-32 PAVISTMA	5701.57	5533.67	973.18N	456.71E	103.0	842.86	808.79	24.73
5713.00	5621.06	822.97N	377.56W	4-2-32 PAVISTMA	5792.57	5624.66	973.76N	455.63E	104.1	846.73	812.18	24.50
5813.00	5718.92	841.65N	386.14W	4-2-32 PAVISTMA	5888.60	5720.69	974.61N	455.15E	105.4	851.73	816.72	24.33
5913.00	5816.78	860.34N	394.71W	4-2-32 PAVISTMA	5986.99	5819.08	975.28N	454.75E	106.6	857.20	821.75	24.18
6013.00	5914.65	879.02N	403.28W	4-2-32 PAVISTMA	6082.55	5914.64	975.93N	454.54E	107.8	863.28	827.40	24.06
6113.00	6012.51	897.71N	411.85W	4-2-32 PAVISTMA	6180.02	6012.10	976.70N	454.51E	109.1	869.95	833.67	23.98
6213.00	6110.38	916.39N	420.42W	4-2-32 PAVISTMA	6278.55	6110.63	977.54N	454.44E	110.3	877.00	840.33	23.91
6313.00	6208.24	935.08N	429.00W	4-2-32 PAVISTMA	6377.62	6209.69	978.90N	454.31E	111.4	884.40	847.35	23.87
6413.00	6306.11	953.76N	437.57W	4-2-32 PAVISTMA	6477.39	6309.45	980.43N	454.06E	112.5	892.04	854.62	23.84
6513.00	6403.97	972.45N	446.14W	4-2-32 PAVISTMA	6575.92	6407.97	981.47N	453.64E	113.7	899.84	862.08	23.83
6525.47	6416.17	974.78N	447.21W	4-2-32 PAVISTMA	6588.14	6420.19	981.57N	453.59E	113.8	900.83	863.03	23.83
6613.00	6501.83	991.13N	454.71W	4-2-32 PAVISTMA	6676.78	6508.83	981.88N	453.06E	114.8	907.85	869.77	23.84
6713.00	6599.70	1009.82N	463.29W	4-2-32 PAVISTMA	6774.92	6606.96	981.77N	452.29E	116.0	916.03	877.66	23.88
6720.17	6606.72	1011.16N	463.90W	4-2-32 PAVISTMA	6781.94	6613.98	981.75N	452.23E	116.1	916.63	878.25	23.88
6813.00	6697.79	1028.59N	464.35W	4-2-32 PAVISTMA	6873.38	6705.42	981.37N	451.48E	71.4	917.07	878.44	23.74
6913.00	6794.55	1047.23N	448.10W	4-2-32 PAVISTMA	6972.29	6804.32	980.24N	450.44E	42.4	901.08	862.20	23.17
7013.00	6887.05	1065.16N	414.98W	4-2-32 PAVISTMA	7064.09	6896.09	978.77N	449.33E	31.5	868.67	829.54	22.20
7113.00	6972.48	1081.84N	366.01W	4-2-32 PAVISTMA	7146.77	6978.76	977.52N	448.46E	27.8	821.14	781.77	20.85
7213.00	7048.24	1096.76N	302.66W	4-2-32 PAVISTMA	7219.45	7051.44	976.59N	447.96E	28.0	760.19	720.56	19.18
7313.00	7112.03	1109.48N	226.87W	4-2-32 PAVISTMA	7282.30	7114.28	975.80N	447.60E	31.6	687.59	647.69	17.23
7413.00	7161.91	1119.59N	140.94W	4-2-32 PAVISTMA	7332.66	7164.63	975.03N	447.18E	39.9	605.63	565.45	15.07
7513.00	7196.36	1126.80N	47.48W	4-2-32 PAVISTMA	7366.14	7198.10	974.52N	446.90E	55.2	517.30	476.86	12.79

All data is in Feet unless otherwise stated  
Coordinates are from Slot MD's are from Rig and TVD's are from Rig ( Planned Datum #1 4967.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 82.820 degrees  
Prepared by Peterson Energy  
Date Printed: 28-Jan-2013

SYSDRILL  
Closest Approach + Clearance Factor Report  
Wellbore: PAVISTMA 10 #1-3-32-090-8-CH (PWB)  
Wellpath: PAVISTMA 10 #1-3-32-090-8-CH (PWP#1)



**Clearance Data**

Reference MD[ft]	Reference TVD[ft]	Reference North[ft]	Reference East[ft]	Offset Well	Offset MD[ft]	Offset TVD[ft]	Offset North[ft]	Offset East[ft]	Angle From Highside [deg]	Closest Approach Distance [ft]	Ellipse Separation [ft]	Clearance Factor
7613.00	7214.35	1130.89N	50.68E	4-2-32 PAVISTMA	7383.25	7215.21	974.26N	446.76E	77.6	425.93	385.29	10.48
7668.64	7217.00	1131.76N	106.23E	4-2-32 PAVISTMA	7385.43	7217.39	974.22N	446.74E	90.1	375.19	334.54	9.23
7713.00	7217.00	1132.05N	150.58E	4-2-32 PAVISTMA	7385.06	7217.02	974.23N	446.74E	90.0	335.59	295.02	8.27
7813.00	7217.00	1132.71N	250.58E	4-2-32 PAVISTMA	7384.22	7216.19	974.24N	446.75E	89.7	252.18	212.68	6.38
7913.00	7217.00	1133.36N	350.58E	4-2-32 PAVISTMA	7383.39	7215.35	974.25N	446.76E	89.4	185.93	151.10	5.34
7919.82	7217.00	1133.41N	357.40E	4-2-32 PAVISTMA	7383.33	7215.30	974.25N	446.76E	89.4	182.53	148.28	5.33
8008.14	7217.00	1133.99N	445.72E	4-2-32 PAVISTMA	7382.59	7214.56	974.27N	446.76E	89.1	159.74	136.15	6.77
8013.00	7217.00	1134.02N	450.58E	4-2-32 PAVISTMA	7382.55	7214.52	974.27N	446.76E	89.1	159.82	136.84	6.96
8113.00	7217.00	1134.68N	550.58E	4-2-32 PAVISTMA	7381.72	7213.69	974.28N	446.77E	88.8	191.09	171.25	9.63
8213.00	7217.00	1135.33N	650.57E	4-2-32 PAVISTMA	7380.89	7212.85	974.29N	446.78E	88.5	259.78	233.98	10.07
8313.00	7217.00	1135.99N	750.57E	4-2-32 PAVISTMA	7380.05	7212.02	974.30N	446.79E	88.2	344.17	314.39	11.56
8413.00	7217.00	1136.64N	850.57E	4-2-32 PAVISTMA	7379.22	7211.18	974.32N	446.79E	87.9	435.22	403.14	13.57
8513.00	7217.00	1137.30N	950.57E	4-2-32 PAVISTMA	7378.38	7210.35	974.33N	446.80E	87.6	529.51	495.99	15.80
8613.00	7217.00	1137.95N	1050.57E	4-2-32 PAVISTMA	7377.55	7209.51	974.34N	446.81E	87.3	625.58	591.09	18.14
8713.00	7217.00	1138.61N	1150.56E	4-2-32 PAVISTMA	7376.71	7208.68	974.36N	446.81E	87.0	722.71	687.53	20.54
8813.00	7217.00	1139.26N	1250.56E	4-2-32 PAVISTMA	7375.88	7207.85	974.37N	446.82E	86.7	820.53	784.83	22.98
8913.00	7217.00	1139.92N	1350.56E	4-2-32 PAVISTMA	7375.05	7207.01	974.38N	446.83E	86.4	918.82	882.71	25.44
9013.00	7217.00	1140.58N	1450.56E	4-2-32 PAVISTMA	7374.21	7206.18	974.39N	446.83E	86.1	1017.45	981.00	27.91
9113.00	7217.00	1141.23N	1550.55E	4-2-32 PAVISTMA	7373.38	7205.34	974.41N	446.84E	85.8	1116.31	1079.58	30.39
9213.00	7217.00	1141.89N	1650.55E	4-2-32 PAVISTMA	7372.54	7204.51	974.42N	446.85E	85.5	1215.36	1178.40	32.88
9313.00	7217.00	1142.54N	1750.55E	4-2-32 PAVISTMA	7371.71	7203.68	974.43N	446.85E	85.2	1314.56	1277.38	35.36
9413.00	7217.00	1143.20N	1850.55E	4-2-32 PAVISTMA	7370.88	7202.84	974.45N	446.86E	84.9	1413.87	1376.51	37.85
9513.00	7217.00	1143.85N	1950.55E	4-2-32 PAVISTMA	7370.04	7202.01	974.46N	446.87E	84.6	1513.26	1475.74	40.33
9613.00	7217.00	1144.51N	2050.54E	4-2-32 PAVISTMA	7369.21	7201.17	974.47N	446.87E	84.3	1612.74	1575.06	42.81
9713.00	7217.00	1145.16N	2150.54E	4-2-32 PAVISTMA	7368.37	7200.34	974.48N	446.88E	84.0	1712.27	1674.46	45.28
9813.00	7217.00	1145.82N	2250.54E	4-2-32 PAVISTMA	7367.54	7199.51	974.50N	446.89E	83.7	1811.85	1773.91	47.76
9913.00	7217.00	1146.48N	2350.54E	4-2-32 PAVISTMA	7366.70	7198.67	974.51N	446.90E	83.4	1911.48	1873.42	50.22
10013.00	7217.00	1147.13N	2450.54E	4-2-32 PAVISTMA	7365.87	7197.84	974.52N	446.90E	83.2	2011.15	1972.97	52.68
10113.00	7217.00	1147.79N	2550.53E	4-2-32 PAVISTMA	7365.04	7197.00	974.53N	446.91E	82.8	2110.84	2072.56	55.14
10213.00	7217.00	1148.44N	2650.53E	4-2-32 PAVISTMA	7364.20	7196.17	974.55N	446.92E	82.6	2210.56	2172.18	57.59
10313.00	7217.00	1149.10N	2750.53E	4-2-32 PAVISTMA	7363.37	7195.33	974.56N	446.92E	82.3	2310.31	2271.83	60.04
10413.00	7217.00	1149.75N	2850.53E	4-2-32 PAVISTMA	7362.53	7194.50	974.57N	446.93E	82.0	2410.08	2371.50	62.48
10513.00	7217.00	1150.41N	2950.52E	4-2-32 PAVISTMA	7361.70	7193.67	974.59N	446.94E	81.7	2509.86	2471.20	64.92
10613.00	7217.00	1151.07N	3050.52E	4-2-32 PAVISTMA	7360.86	7192.83	974.60N	446.94E	81.4	2609.66	2570.91	67.34
10713.00	7217.00	1151.72N	3150.52E	4-2-32 PAVISTMA	7360.03	7192.00	974.61N	446.95E	81.1	2709.48	2670.64	69.77
10813.00	7217.00	1152.38N	3250.52E	4-2-32 PAVISTMA	7359.20	7191.16	974.62N	446.96E	80.8	2809.31	2770.39	72.18
10913.00	7217.00	1153.03N	3350.52E	4-2-32 PAVISTMA	7358.36	7190.33	974.64N	446.96E	80.5	2909.15	2870.15	74.59

All data is in Feet unless otherwise stated  
Coordinates are from Slot MD's are from Rig and TVD's are from Rig ( Planned Datum #1 4967.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 82.820 degrees  
Prepared by Peterson Energy  
Date Printed: 28-Jan-2013

SYSDRILL  
Closest Approach + Clearance Factor Report  
Wellbore: PAVISTMA 10 #1-3-32-090-8-CH (PWB)  
Wellpath: PAVISTMA 10 #1-3-32-090-8-CH (PWP#1)



**Clearance Data**

Reference MD[ft]	Reference TVD[ft]	Reference North[ft]	Reference East[ft]	Offset Well	Offset MD[ft]	Offset TVD[ft]	Offset North[ft]	Offset East[ft]	Angle From Highside [deg]	Closest Approach Distance [ft]	Ellipse Separation [ft]	Clearance Factor
11013.00	7217.00	1153.69N	3450.51E	4-2-32 PAVISTMA	7357.53	7189.50	974.65N	446.97E	80.2	3009.00	2969.92	77.00
11113.00	7217.00	1154.34N	3550.51E	4-2-32 PAVISTMA	7356.69	7188.66	974.66N	446.98E	79.9	3108.86	3069.70	79.39
11213.00	7217.00	1155.00N	3650.51E	4-2-32 PAVISTMA	7355.86	7187.83	974.68N	446.98E	79.6	3208.73	3169.49	81.78
11313.00	7217.00	1155.65N	3750.51E	4-2-32 PAVISTMA	7355.02	7186.99	974.69N	446.99E	79.3	3308.60	3269.30	84.17
11413.00	7217.00	1156.31N	3850.51E	4-2-32 PAVISTMA	7354.19	7186.16	974.70N	447.00E	79.0	3408.49	3369.11	86.55
11513.00	7217.00	1156.97N	3950.50E	4-2-32 PAVISTMA	7353.36	7185.33	974.71N	447.01E	78.8	3508.38	3468.92	88.92
11613.00	7217.00	1157.62N	4050.50E	4-2-32 PAVISTMA	7352.52	7184.49	974.73N	447.01E	78.5	3608.27	3568.75	91.28
11713.00	7217.00	1158.28N	4150.50E	4-2-32 PAVISTMA	7351.69	7183.66	974.74N	447.02E	78.2	3708.17	3668.58	93.64
11813.00	7217.00	1158.93N	4250.50E	4-2-32 PAVISTMA	7350.85	7182.82	974.75N	447.03E	77.9	3808.08	3768.41	95.99
11913.00	7217.00	1159.59N	4350.49E	4-2-32 PAVISTMA	7350.02	7181.99	974.76N	447.03E	77.6	3907.99	3868.25	98.34
12013.00	7217.00	1160.24N	4450.49E	4-2-32 PAVISTMA	7349.19	7181.16	974.78N	447.04E	77.3	4007.91	3968.10	100.68
12113.00	7217.00	1160.90N	4550.49E	4-2-32 PAVISTMA	7348.35	7180.32	974.79N	447.05E	77.0	4107.83	4067.95	103.01
12213.00	7217.00	1161.55N	4650.49E	4-2-32 PAVISTMA	7347.52	7179.49	974.80N	447.05E	76.7	4207.75	4167.80	105.34
12254.47	7217.00	1161.83N	4691.96E	4-2-32 PAVISTMA	7347.17	7179.14	974.81N	447.06E	76.6	4249.19	4209.21	106.28
12258.36	7217.00	1161.85N	4695.85E	4-2-32 PAVISTMA	7347.14	7179.11	974.81N	447.06E	77.1	4253.08	4213.09	106.36
12313.00	7217.00	1162.13N	4750.49E	4-2-32 PAVISTMA	7346.68	7178.65	974.82N	447.06E	76.9	4307.67	4267.65	107.64
12413.00	7217.00	1162.65N	4850.48E	4-2-32 PAVISTMA	7345.22	7177.19	974.84N	447.07E	76.4	4407.60	4367.51	109.96
12513.00	7217.00	1163.17N	4950.48E	4-2-32 PAVISTMA	7344.38	7176.35	974.85N	447.08E	76.2	4507.52	4467.37	112.27
12613.00	7217.00	1163.69N	5050.48E	4-2-32 PAVISTMA	7343.53	7175.50	974.86N	447.09E	75.9	4607.45	4567.24	114.57
12713.00	7217.00	1164.21N	5150.48E	4-2-32 PAVISTMA	7342.68	7174.66	974.88N	447.09E	75.6	4707.39	4667.10	116.86
12813.00	7217.00	1164.73N	5250.48E	4-2-32 PAVISTMA	7341.84	7173.81	974.89N	447.10E	75.3	4807.32	4766.97	119.14
12913.00	7217.00	1165.25N	5350.48E	4-2-32 PAVISTMA	7340.99	7172.96	974.90N	447.11E	75.0	4907.26	4866.85	121.42
13013.00	7217.00	1165.77N	5450.48E	4-2-32 PAVISTMA	7340.14	7172.12	974.92N	447.11E	74.8	5007.20	4966.72	123.69
13113.00	7217.00	1166.29N	5550.48E	4-2-32 PAVISTMA	7339.30	7171.27	974.93N	447.12E	74.5	5107.14	5066.60	125.96
13213.00	7217.00	1166.81N	5650.47E	4-2-32 PAVISTMA	7338.45	7170.42	974.94N	447.13E	74.2	5207.09	5166.48	128.21
13313.00	7217.00	1167.33N	5750.47E	4-2-32 PAVISTMA	7337.61	7169.58	974.95N	447.14E	74.0	5307.04	5266.36	130.47
13413.00	7217.00	1167.85N	5850.47E	4-2-32 PAVISTMA	7336.76	7168.73	974.97N	447.14E	73.7	5406.99	5366.24	132.71
13513.00	7217.00	1168.37N	5950.47E	4-2-32 PAVISTMA	7335.91	7167.88	974.98N	447.15E	73.4	5506.94	5466.13	134.95
13613.00	7217.00	1168.89N	6050.47E	4-2-32 PAVISTMA	7335.07	7167.04	974.99N	447.16E	73.1	5606.89	5566.02	137.18
13713.00	7217.00	1169.41N	6150.47E	4-2-32 PAVISTMA	7334.22	7166.19	975.01N	447.16E	72.9	5706.84	5665.90	139.41
13813.00	7217.00	1169.93N	6250.47E	4-2-32 PAVISTMA	7333.37	7165.34	975.02N	447.17E	72.6	5806.80	5765.80	141.63
13913.00	7217.00	1170.45N	6350.46E	4-2-32 PAVISTMA	7332.53	7164.50	975.03N	447.18E	72.3	5906.75	5865.69	143.84
14013.00	7217.00	1170.97N	6450.46E	4-2-32 PAVISTMA	7331.68	7163.65	975.05N	447.19E	72.0	6006.71	5965.58	146.04
14113.00	7217.00	1171.49N	6550.46E	4-2-32 PAVISTMA	7330.83	7162.80	975.06N	447.19E	71.8	6106.67	6065.48	148.24
14213.00	7217.00	1172.01N	6650.46E	4-2-32 PAVISTMA	7329.99	7161.96	975.07N	447.20E	71.5	6206.63	6165.37	150.44
14313.00	7217.00	1172.53N	6750.46E	4-2-32 PAVISTMA	7329.14	7161.11	975.08N	447.21E	71.3	6306.59	6265.27	152.62
14413.00	7217.00	1173.05N	6850.46E	4-2-32 PAVISTMA	7328.29	7160.27	975.10N	447.21E	71.0	6406.55	6365.17	154.80

All data is in Feet unless otherwise stated  
Coordinates are from Slot MD's are from Rig and TVD's are from Rig ( Planned Datum #1 4967.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 82.820 degrees  
Prepared by Peterson Energy  
Date Printed: 28-Jan-2013

SYSDRILL  
Closest Approach + Clearance Factor Report  
Wellbore: PAVISTMA 10 #1-3-32-090-8-CH (PWB)  
Wellpath: PAVISTMA 10 #1-3-32-090-8-CH (PWP#1)



**Clearance Data**

Reference MD[ft]	Reference TVD[ft]	Reference North[ft]	Reference East[ft]	Offset Well	Offset MD[ft]	Offset TVD[ft]	Offset North[ft]	Offset East[ft]	Angle From Highside [deg]	Closest Approach Distance [ft]	Ellipse Separation [ft]	Clearance Factor
14513.00	7217.00	1173.57N	6950.46E	4-2-32 PAVISTMA	7327.45	7159.42	975.11N	447.22E	70.7	6506.52	6465.07	156.98
14613.00	7217.00	1174.09N	7050.46E	4-2-32 PAVISTMA	7326.60	7158.57	975.12N	447.23E	70.5	6606.48	6564.97	159.14
14713.00	7217.00	1174.60N	7150.45E	4-2-32 PAVISTMA	7325.75	7157.73	975.14N	447.24E	70.2	6706.45	6664.87	161.31
14813.00	7217.00	1175.12N	7250.45E	4-2-32 PAVISTMA	7324.91	7156.88	975.15N	447.24E	69.9	6806.41	6764.77	163.46
14913.00	7217.00	1175.64N	7350.45E	4-2-32 PAVISTMA	7324.06	7156.03	975.16N	447.25E	69.7	6906.38	6864.68	165.61
15013.00	7217.00	1176.16N	7450.45E	4-2-32 PAVISTMA	7323.21	7155.19	975.17N	447.26E	69.4	7006.35	6964.58	167.75
15113.00	7217.00	1176.68N	7550.45E	4-2-32 PAVISTMA	7322.37	7154.34	975.19N	447.26E	69.2	7106.32	7064.49	169.88
15213.00	7217.00	1177.20N	7650.45E	4-2-32 PAVISTMA	7321.52	7153.49	975.20N	447.27E	68.9	7206.29	7164.39	172.01
15313.00	7217.00	1177.72N	7750.45E	4-2-32 PAVISTMA	7320.67	7152.65	975.21N	447.28E	68.6	7306.26	7264.30	174.14
15413.00	7217.00	1178.24N	7850.44E	4-2-32 PAVISTMA	7319.83	7151.80	975.23N	447.29E	68.4	7406.23	7364.21	176.25
15513.00	7217.00	1178.76N	7950.44E	4-2-32 PAVISTMA	7318.98	7150.95	975.24N	447.29E	68.1	7506.20	7464.12	178.36
15613.00	7217.00	1179.28N	8050.44E	4-2-32 PAVISTMA	7318.13	7150.11	975.25N	447.30E	67.9	7606.17	7564.03	180.47
15713.00	7217.00	1179.80N	8150.44E	4-2-32 PAVISTMA	7317.29	7149.26	975.26N	447.31E	67.6	7706.15	7663.94	182.56
15813.00	7217.00	1180.32N	8250.44E	4-2-32 PAVISTMA	7316.44	7148.41	975.28N	447.31E	67.4	7806.12	7763.85	184.65
15913.00	7217.00	1180.84N	8350.44E	4-2-32 PAVISTMA	7315.59	7147.57	975.29N	447.32E	67.1	7906.09	7863.76	186.74
16013.00	7217.00	1181.36N	8450.44E	4-2-32 PAVISTMA	7314.75	7146.72	975.30N	447.33E	66.9	8006.07	7963.67	188.82
16113.00	7217.00	1181.88N	8550.43E	4-2-32 PAVISTMA	7313.90	7145.88	975.32N	447.33E	66.6	8106.04	8063.58	190.89
16213.00	7217.00	1182.40N	8650.43E	4-2-32 PAVISTMA	7313.05	7145.03	975.33N	447.34E	66.4	8206.02	8163.49	192.96
16313.00	7217.00	1182.92N	8750.43E	4-2-32 PAVISTMA	7312.21	7144.18	975.34N	447.35E	66.1	8306.00	8263.41	195.02
16413.00	7217.00	1183.44N	8850.43E	4-2-32 PAVISTMA	7311.36	7143.34	975.36N	447.36E	65.9	8405.97	8363.32	197.07
16513.00	7217.00	1183.96N	8950.43E	4-2-32 PAVISTMA	7310.51	7142.49	975.37N	447.36E	65.6	8505.95	8463.23	199.12
16613.00	7217.00	1184.48N	9050.43E	4-2-32 PAVISTMA	7309.67	7141.64	975.38N	447.37E	65.4	8605.93	8563.15	201.16
16713.00	7217.00	1185.00N	9150.43E	4-2-32 PAVISTMA	7308.82	7140.80	975.39N	447.38E	65.1	8705.91	8663.06	203.19
16813.00	7217.00	1185.52N	9250.43E	4-2-32 PAVISTMA	7307.97	7139.95	975.41N	447.38E	64.9	8805.88	8762.98	205.22
16913.00	7217.00	1186.04N	9350.42E	4-2-32 PAVISTMA	7307.13	7139.10	975.42N	447.39E	64.6	8905.86	8862.89	207.25
16986.70	7217.00	1186.42N	9424.12E	4-2-32 PAVISTMA	7306.50	7138.48	975.43N	447.40E	64.5	8979.55	8936.53	208.72

**Offset Wellbore Survey Tool Programs**

Well	Wellbore	Survey Name	MD[ft]	Survey Tool	Error Model
PAVISTMA 4-2-32	PAVISTMA 4-2-32 (AWB)	ACTUAL	7633.00	ISCWSA MWD	Rev 0

All data is in Feet unless otherwise stated  
Coordinates are from Slot MD's are from Rig and TVD's are from Rig ( Planned Datum #1 4967.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 82.820 degrees  
Prepared by Peterson Energy  
Date Printed: 28-Jan-2013