



Directional Survey

DELAWARE BASIN UNRESTRICTED

Well Name: ARK 36 STATE 2H

Sub-Division	Region	Field Name	County	State/Province
DELAWARE BASIN	EDDY COUNTY CORE	INGLE WELLS	EDDY	NM
Surface Legal Location	API/UW	Latitude (°)	Longitude (°)	Orig KB Elevation (ft)
SEC36 T22S R 31E	3001543027	32° 20' 27.846" N	103° 44' 6.679" W	3,479.00
				Ground Elev MSL (ft)
				3,454.00
				KB - 0.00
				25.00

Wellbore	Parent Wellbore	SAP Well ID	Vertical Section Direction (°)
	OH	38721	350.83

Kick Off & Key Depths

Date	Type	Top Depth (ftKB)
8/25/2015	KICK OFF	10,984.0
Actual Deviation Survey	Definitive?	Proposed?
EXTREME/LWD SURVEYS, Proposed? No	No	No
Proposed Deviation Survey		

Deviation Survey

Date		Description			
8/15/2015		EXTREME/LWD SURVEYS			
MD Tie In (ftKB)	TVD Tie In (ftKB)	Inclination Tie In (°)	Azimuth Tie In (°)	NSTie In (ft)	EWtie In (ft)
0.00	0.00	0.00	0.00	0.00	0.00

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	CLS (°/100ft)	Survey Tool	Survey Company
8/15/2015	212.00	0.48	11.22	212.00	212.00	212.00	212.00	0.00	MS	EXTREME ENGINEERING
8/15/2015	333.00	0.22	249.00	333.00	333.00	333.00	333.00	0.00	MS	EXTREME ENGINEERING
8/15/2015	430.00	0.40	269.36	430.00	430.00	430.00	430.00	0.00	MS	EXTREME ENGINEERING
8/15/2015	516.00	0.62	274.45	516.00	516.00	516.00	516.00	0.00	MS	EXTREME ENGINEERING
8/15/2015	581.00	0.70	244.53	581.00	581.00	581.00	581.00	0.00	MS	EXTREME ENGINEERING
8/15/2015	680.00	0.70	245.54	680.00	680.00	680.00	680.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	854.00	0.40	289.53	854.00	854.00	854.00	854.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	947.00	0.48	281.84	947.00	947.00	947.00	947.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	1,048.00	0.48	284.74	1,048.00	1,048.00	1,048.00	1,048.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	1,143.00	0.48	285.13	1,143.00	1,143.00	1,143.00	1,143.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	1,237.00	0.48	283.33	1,237.00	1,237.00	1,237.00	1,237.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	1,332.00	0.62	285.22	1,332.00	1,332.00	1,332.00	1,332.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	1,422.00	0.79	290.14	1,422.00	1,422.00	1,422.00	1,422.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	1,511.00	0.70	282.32	1,511.00	1,511.00	1,511.00	1,511.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	1,600.00	0.79	281.53	1,600.00	1,600.00	1,600.00	1,600.00	0.00	MS	EXTREME ENGINEERING
8/15/2015	1,690.00	0.79	278.23	1,690.00	1,690.00	1,690.00	1,690.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	1,775.00	0.88	279.42	1,775.00	1,775.00	1,775.00	1,775.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	1,864.00	0.88	274.72	1,864.00	1,864.00	1,864.00	1,864.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	1,954.00	1.01	276.52	1,954.00	1,954.00	1,954.00	1,954.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	2,042.00	1.10	272.52	2,042.00	2,042.00	2,042.00	2,042.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	2,132.00	1.10	273.22	2,132.00	2,132.00	2,132.00	2,132.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	2,221.00	1.19	270.83	2,221.00	2,221.00	2,221.00	2,221.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	2,310.00	1.32	272.35	2,310.00	2,310.00	2,310.00	2,310.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	2,399.00	1.32	272.35	2,399.00	2,399.00	2,399.00	2,399.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	2,489.00	1.32	271.33	2,489.00	2,489.00	2,489.00	2,489.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	2,578.00	1.41	271.33	2,578.00	2,578.00	2,578.00	2,578.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	2,668.00	1.49	276.65	2,668.00	2,668.00	2,668.00	2,668.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	2,757.00	1.41	278.15	2,757.00	2,757.00	2,757.00	2,757.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	2,846.00	1.58	278.85	2,846.00	2,846.00	2,846.00	2,846.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	2,936.00	1.71	277.84	2,936.00	2,936.00	2,936.00	2,936.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	3,025.00	1.89	280.83	3,025.00	3,025.00	3,025.00	3,025.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	3,114.00	2.02	281.13	3,114.00	3,114.00	3,114.00	3,114.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	3,203.00	1.89	278.63	3,203.00	3,203.00	3,203.00	3,203.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	3,295.00	1.89	276.74	3,295.00	3,295.00	3,295.00	3,295.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	3,384.00	2.02	274.63	3,384.00	3,384.00	3,384.00	3,384.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	3,473.00	1.89	274.06	3,473.00	3,473.00	3,473.00	3,473.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	3,562.00	1.80	271.33	3,562.00	3,562.00	3,562.00	3,562.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	3,651.00	1.49	261.75	3,651.00	3,651.00	3,651.00	3,651.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	3,740.00	1.32	248.13	3,740.00	3,740.00	3,740.00	3,740.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	3,832.00	1.19	243.56	3,832.00	3,832.00	3,832.00	3,832.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	3,921.00	1.19	234.73	3,921.00	3,921.00	3,921.00	3,921.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	4,010.00	1.19	217.94	4,010.00	4,010.00	4,010.00	4,010.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	4,099.00	1.32	205.64	4,099.00	4,099.00	4,099.00	4,099.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	4,189.00	1.49	193.24	4,189.00	4,189.00	4,189.00	4,189.00	0.00	MS	EXTREME ENGINEERING
8/18/2015	4,249.00	1.49	189.66	4,249.00	4,249.00	4,249.00	4,249.00	0.00	MS	EXTREME ENGINEERING
8/22/2015	4,402.00	1.41	198.87	4,402.00	4,402.00	4,402.00	4,402.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	4,490.00	1.49	227.07	4,490.00	4,490.00	4,490.00	4,490.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	4,580.00	2.02	242.64	4,580.00	4,580.00	4,580.00	4,580.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	4,670.00	2.81	271.45	4,670.00	4,670.00	4,670.00	4,670.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	4,759.00	4.04	277.02	4,759.00	4,759.00	4,759.00	4,759.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	4,849.00	5.28	279.50	4,849.00	4,849.00	4,849.00	4,849.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	4,938.00	6.51	277.64	4,938.00	4,938.00	4,938.00	4,938.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	5,027.00	8.09	271.45	5,027.00	5,027.00	5,027.00	5,027.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	5,117.00	8.71	269.77	5,117.00	5,117.00	5,117.00	5,117.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	5,206.00	8.62	268.95	5,206.00	5,206.00	5,206.00	5,206.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	5,296.00	8.79	267.61	5,296.00	5,296.00	5,296.00	5,296.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	5,385.00	8.27	265.55	5,385.00	5,385.00	5,385.00	5,385.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	5,474.00	8.35	265.14	5,474.00	5,474.00	5,474.00	5,474.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	5,564.00	8.53	268.91	5,564.00	5,564.00	5,564.00	5,564.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	5,653.00	8.88	269.06	5,653.00	5,653.00	5,653.00	5,653.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	5,743.00	8.88	268.40	5,743.00	5,743.00	5,743.00	5,743.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	5,832.00	8.97	268.56	5,832.00	5,832.00	5,832.00	5,832.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	5,921.00	8.79	268.52	5,921.00	5,921.00	5,921.00	5,921.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	6,011.00	8.62	267.35	6,011.00	6,011.00	6,011.00	6,011.00	0.00	LWD	PATHFINDER ENERGY SE...



Directional Survey

DELAWARE BASIN UNRESTRICTED

Well Name: ARK 36 STATE 2H

Sub-Division DELAWARE BASIN	Region EDDY COUNTY CORE	Field Name INGLE WELLS	County EDDY	State/Province NM
Surface Legal Location SEC36 T22S R 31E	API/UWI 3001543027	Latitude (°) 32° 20' 27.846" N	Longitude (°) 103° 44' 6.679" W	Orig KB Elevation (ft) 3,479.00
				Ground Elev MSL (ft) 3,454.00
				KB Elev (ft) 26.00

Survey Data										
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DB (ft/100ft)	Survey Tool	Survey Company
8/22/2015	6,189.00	7.91	267.90	6,189.00	6,189.00	6,189.00	6,189.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	6,279.00	7.91	267.98	6,279.00	6,279.00	6,279.00	6,279.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	6,368.00	7.83	267.97	6,368.00	6,368.00	6,368.00	6,368.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	6,457.00	7.65	267.79	6,457.00	6,457.00	6,457.00	6,457.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	6,547.00	7.91	267.60	6,547.00	6,547.00	6,547.00	6,547.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	6,636.00	7.83	265.38	6,636.00	6,636.00	6,636.00	6,636.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	6,726.00	7.74	265.77	6,726.00	6,726.00	6,726.00	6,726.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	6,815.00	8.00	269.76	6,815.00	6,815.00	6,815.00	6,815.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	6,905.00	7.65	272.57	6,905.00	6,905.00	6,905.00	6,905.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	6,994.00	7.56	274.62	6,994.00	6,994.00	6,994.00	6,994.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	7,084.00	6.95	272.79	7,084.00	7,084.00	7,084.00	7,084.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	7,173.00	6.60	269.94	7,173.00	7,173.00	7,173.00	7,173.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	7,262.00	6.33	269.49	7,262.00	7,262.00	7,262.00	7,262.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	7,352.00	6.24	268.14	7,352.00	7,352.00	7,352.00	7,352.00	0.00	LWD	PATHFINDER ENERGY SE...
8/22/2015	7,441.00	5.80	267.41	7,441.00	7,441.00	7,441.00	7,441.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	7,530.00	5.63	267.00	7,530.00	7,530.00	7,530.00	7,530.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	7,620.00	5.36	265.22	7,620.00	7,620.00	7,620.00	7,620.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	7,709.00	5.36	264.90	7,709.00	7,709.00	7,709.00	7,709.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	7,798.00	5.10	263.78	7,798.00	7,798.00	7,798.00	7,798.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	7,888.00	5.01	264.63	7,888.00	7,888.00	7,888.00	7,888.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	7,977.00	4.84	263.18	7,977.00	7,977.00	7,977.00	7,977.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	8,066.00	4.66	260.55	8,066.00	8,066.00	8,066.00	8,066.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	8,156.00	4.66	256.92	8,156.00	8,156.00	8,156.00	8,156.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	8,245.00	4.22	253.55	8,245.00	8,245.00	8,245.00	8,245.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	8,334.00	4.04	265.55	8,334.00	8,334.00	8,334.00	8,334.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	8,424.00	3.17	259.08	8,424.00	8,424.00	8,424.00	8,424.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	8,513.00	2.73	255.49	8,513.00	8,513.00	8,513.00	8,513.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	8,602.00	2.46	257.63	8,602.00	8,602.00	8,602.00	8,602.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	8,692.00	2.46	260.03	8,692.00	8,692.00	8,692.00	8,692.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	8,781.00	2.55	265.51	8,781.00	8,781.00	8,781.00	8,781.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	8,870.00	2.46	260.93	8,870.00	8,870.00	8,870.00	8,870.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	8,960.00	1.49	271.63	8,960.00	8,960.00	8,960.00	8,960.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	9,049.00	1.41	242.33	9,049.00	9,049.00	9,049.00	9,049.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	9,138.00	0.97	220.61	9,138.00	9,138.00	9,138.00	9,138.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	9,228.00	1.14	207.00	9,228.00	9,228.00	9,228.00	9,228.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	9,317.00	1.32	184.02	9,317.00	9,317.00	9,317.00	9,317.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	9,406.00	1.06	195.33	9,406.00	9,406.00	9,406.00	9,406.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	9,496.00	1.23	185.67	9,496.00	9,496.00	9,496.00	9,496.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	9,585.00	0.70	206.94	9,585.00	9,585.00	9,585.00	9,585.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	9,675.00	0.35	225.75	9,675.00	9,675.00	9,675.00	9,675.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	9,764.00	0.35	236.64	9,764.00	9,764.00	9,764.00	9,764.00	0.00	LWD	PATHFINDER ENERGY SE...
8/23/2015	9,853.00	1.06	235.90	9,853.00	9,853.00	9,853.00	9,853.00	0.00	LWD	PATHFINDER ENERGY SE...
8/24/2015	9,943.00	1.41	240.10	9,943.00	9,943.00	9,943.00	9,943.00	0.00	LWD	PATHFINDER ENERGY SE...
8/24/2015	10,032.00	1.93	228.88	10,032.00	10,032.00	10,032.00	10,032.00	0.00	LWD	PATHFINDER ENERGY SE...
8/24/2015	10,121.00	1.67	254.70	10,121.00	10,121.00	10,121.00	10,121.00	0.00	LWD	PATHFINDER ENERGY SE...
8/24/2015	10,211.00	1.58	271.18	10,211.00	10,211.00	10,211.00	10,211.00	0.00	LWD	PATHFINDER ENERGY SE...
8/24/2015	10,300.00	1.41	258.31	10,300.00	10,300.00	10,300.00	10,300.00	0.00	LWD	PATHFINDER ENERGY SE...
8/24/2015	10,390.00	1.41	286.93	10,390.00	10,390.00	10,390.00	10,390.00	0.00	LWD	PATHFINDER ENERGY SE...
8/24/2015	10,479.00	1.14	285.64	10,479.00	10,479.00	10,479.00	10,479.00	0.00	LWD	PATHFINDER ENERGY SE...
8/24/2015	10,569.00	1.23	295.04	10,569.00	10,569.00	10,569.00	10,569.00	0.00	LWD	PATHFINDER ENERGY SE...
8/24/2015	10,658.00	1.06	259.95	10,658.00	10,658.00	10,658.00	10,658.00	0.00	LWD	PATHFINDER ENERGY SE...
8/24/2015	10,747.00	0.53	175.06	10,747.00	10,747.00	10,747.00	10,747.00	0.00	LWD	PATHFINDER ENERGY SE...
8/24/2015	10,837.00	0.53	137.62	10,837.00	10,837.00	10,837.00	10,837.00	0.00	LWD	PATHFINDER ENERGY SE...
8/24/2015	10,926.00	0.62	44.87	10,926.00	10,926.00	10,926.00	10,926.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	10,949.00	0.53	45.58	10,949.00	10,949.00	10,949.00	10,949.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	10,979.00	1.41	10.38	10,979.00	10,979.00	10,979.00	10,979.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	11,009.00	4.40	358.89	11,009.00	11,009.00	11,009.00	11,009.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	11,039.00	7.21	357.11	11,039.00	11,039.00	11,039.00	11,039.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	11,069.00	10.99	353.53	11,069.00	11,069.00	11,069.00	11,069.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	11,099.00	14.16	351.51	11,099.00	11,099.00	11,099.00	11,099.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	11,128.00	16.88	351.49	11,128.00	11,128.00	11,128.00	11,128.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	11,158.00	19.87	352.69	11,158.00	11,158.00	11,158.00	11,158.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	11,188.00	22.25	355.58	11,188.00	11,188.00	11,188.00	11,188.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	11,217.00	24.89	357.72	11,217.00	11,217.00	11,217.00	11,217.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	11,247.00	28.40	358.86	11,247.00	11,247.00	11,247.00	11,247.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	11,277.00	32.36	358.74	11,277.00	11,277.00	11,277.00	11,277.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	11,307.00	35.79	357.83	11,307.00	11,307.00	11,307.00	11,307.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	11,337.00	40.01	356.85	11,337.00	11,337.00	11,337.00	11,337.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	11,367.00	43.79	356.48	11,367.00	11,367.00	11,367.00	11,367.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	11,396.00	47.57	356.03	11,396.00	11,396.00	11,396.00	11,396.00	0.00	LWD	PATHFINDER ENERGY SE...
8/26/2015	11,426.00	50.39	356.93	11,426.00	11,426.00	11,426.00	11,426.00	0.00	LWD	PATHFINDER ENERGY SE...



Directional Survey

DELAWARE BASIN UNRESTRICTED

Well Name: ARK 36 STATE 2H

Sub-Division DELAWARE BASIN	Region EDDY COUNTY CORE	Field Name INGLE WELLS	County EDDY	State/Province NM
Surface Legal Location SEC36 T22S R 31E	API/UWI 3001543027	Latitude (°) 32° 20' 27.846" N	Longitude (°) 103° 44' 6.679" W	Orig KB Elevation (ft) 3,479.00
				Ground Elev MSL (ft) 3,454.00
				KB Elev (ft) 25.00

Survey Data										Survey Tool	Survey Company
Date	MD (NKB)	Incl (°)	Azn (°)	TVD (NKB)	VS (ft)	N/S (ft)	E/W (ft)	DLB (°/100ft)			
8/26/2015	11,515.00	55.66	359.73	11,515.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,545.00	57.16	0.66	11,545.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,575.00	58.83	0.17	11,575.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,605.00	60.67	359.63	11,605.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,635.00	62.61	359.81	11,635.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,665.00	64.54	359.87	11,665.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,695.00	67.09	0.06	11,695.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,725.00	68.85	0.35	11,725.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,755.00	70.52	0.45	11,755.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,783.00	71.49	0.23	11,783.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,813.00	73.07	359.38	11,813.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,843.00	74.48	358.63	11,843.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,872.00	76.59	358.12	11,872.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,902.00	78.26	358.75	11,902.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,932.00	79.93	359.14	11,932.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,962.00	82.39	358.70	11,962.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	11,992.00	84.24	357.51	11,992.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
8/26/2015	12,022.00	86.09	357.02	12,022.00	11.5	11.5	0.0	0.0		LWD	PATHFINDER ENERGY SE...
9/1/2015	12,139.00	89.96	356.26	12,139.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	12,234.00	90.40	357.91	12,234.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	12,329.00	90.13	357.87	12,329.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	12,423.00	90.48	358.50	12,423.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	12,518.00	90.04	358.56	12,518.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	12,612.00	89.60	357.50	12,612.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	12,706.00	89.78	356.78	12,706.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	12,800.00	89.69	357.60	12,800.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	12,895.00	89.16	357.30	12,895.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	12,989.00	89.60	357.85	12,989.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	13,084.00	89.52	357.73	13,084.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	13,178.00	89.52	357.19	13,178.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	13,272.00	89.78	357.18	13,272.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	13,366.00	89.69	357.88	13,366.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	13,461.00	90.22	357.11	13,461.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	13,555.00	90.66	357.50	13,555.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	13,650.00	90.13	357.61	13,650.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/1/2015	13,744.00	90.40	357.80	13,744.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	13,838.00	90.75	357.73	13,838.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	13,932.00	90.84	357.27	13,932.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	14,027.00	91.19	356.40	14,027.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	14,122.00	90.84	356.67	14,122.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	14,217.00	90.84	358.85	14,217.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	14,311.00	90.92	357.53	14,311.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	14,406.00	91.10	357.65	14,406.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	14,501.00	90.57	356.91	14,501.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	14,596.00	90.57	356.49	14,596.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	14,691.00	90.66	356.85	14,691.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	14,786.00	91.01	357.24	14,786.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	14,880.00	90.48	356.63	14,880.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	14,975.00	90.66	356.35	14,975.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	15,070.00	90.75	356.04	15,070.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	15,164.00	90.66	355.86	15,164.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	15,259.00	90.57	356.07	15,259.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	15,354.00	90.66	357.38	15,354.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	15,638.00	89.96	358.83	15,638.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	15,733.00	90.13	359.88	15,733.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	15,828.00	89.60	0.11	15,828.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	15,922.00	90.13	359.01	15,922.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	16,017.00	89.96	358.68	16,017.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	16,040.00	90.04	359.15	16,040.00	11.5	11.5	0.0	0.0		MWD	PATHFINDER ENERGY SE...
9/2/2015	16,118.00	90.04	359.15	16,118.00	11.5	11.5	0.0	0.0		BIT	PATHFINDER ENERGY SE...