

HOBBS OCD

Perforation Summary

Well Name
SALADO DRAW WE 23 FED P25 001H
NMNM118723
Perforations Surface ChevNo PJ8995 Surface UWI 3002543460 Field Name **JENNINGS** Mid-Continent Chg Sz # Shots Phasing Gun Size Dens Entered Perf Comp Date Perforation Type Top (ftKB) Btm (ftKB) (in) Charge Make Carrier Make (shots/ft) Shot Total Misfired Com 9.228.0 9.229.0 3 1/8 22.7 Halliburton Energy Halliburton 6 0 Halliburton Stage 49 Shaped Charge Services 9.253.0 9.254.0 Shaped Charge 3 1/8 22.7 Halliburton Energy Halliburton 5 0 Halliburton Stage 49 Services 9.278.0 9.279.0 Shaped Charge 3 1/8 22.7 Halliburton Energy Halliburton 5.0 5 0 Halliburton Stage 49 Services 9.303.0 9.304.0 90 3 1/8 22.7 Halliburton Energy Halliburton 4.0 Shaped Charge 4 0 Halliburton Stage 49 Services 22.7 Halliburton Energy **Shaped Charge** 9.328.0 9.329.0 90 3 1/8 Halliburton 4.0 4 0 Halliburton Stage 49 Services 9.353.0 9.354.0 90 Halliburton Shaped Charge 3 1/8 22.7 Halliburton Energy 4.0 0 Halliburton Stage 49 Services 9.378.0 9.379.0 90 Halliburton Energy 4.0 **Shaped Charge** 22.7 Halliburton 4 0 Halliburton Stage 49 Services Shaped Charge 9.403.0 9,404.0 3 1/8 22.7 Halliburton Energy Halliburton 3 0 Halliburton Stage 49 Services 9,429.0 9,428.0 60 22.7 Halliburton Energy 6 Shaped Charge 3 1/8 Halliburton 6.0 0 Halliburton Stage 48 Services 9.453.0 9.454.0 Halliburton Shaped Charge 3 1/8 22.7 Halliburton Energy 5 0 Halliburton Stage 48 Services Shaped Charge 9,478.0 9,479.0 3 1/8 22.7 Halliburton Energy Halliburton 5.0 5 0 Halliburton Stage 48 Services **Shaped Charge** 9.503.0 9.504.0 90 3 1/8 22.7 Halliburton Energy Halliburton 4.0 4 0 Halliburton Stage 48 Services Shaped Charge 9.528.0 9,529.0 90 3 1/8 22.7 Halliburton Energy Halliburton 4.0 4 0 Halliburton Stage 48 Services **Shaped Charge** 9.553.0 9.554.0 90 3 1/8 22.7 Halliburton Energy Halliburton 4.0 4 0 Halliburton Stage 48 Services 9.579.0 90 6/9/2017 Shaped Charge 9.578.0 3 1/8 22.7 Halliburton Energy Halliburton 4.0 4 0 Halliburton Stage 48 Services 9,604.0 120 3 1/8 3 22.7 Halliburton Energy 0 Halliburton **Shaped Charge** Halliburton Stage 48 Services Shaped Charge 9.630.0 9.631.0 60 3 1/8 22.7 Halliburton Energy Halliburton 6.0 6 0 Halliburton Stage 47 Services 9.654.0 Shaped Charge 22.7 Halliburton Energy Halliburton 5 0 Halliburton Stage 47 Services Shaped Charge 9.678.0 9.679.0 3 1/8 22.7 Halliburton Energy Halliburton 5.0 5 0 Halliburton Stage 47 Services 6/8/2017 Shaped Charge 9.703.0 9,704.0 90 3 1/8 22.7 Halliburton Energy Halliburton 4.0 4 0 Halliburton Stage 47 Services 9.728.0 9.729.0 90 3 1/8 22.7 Halliburton Energy Halliburton 6/8/2017 Shaped Charge 4.0 0 Halliburton 4 Stage 47 Services



Well Name SALADO DRA	AW WE 23 FED P25 001H	Lease NMNM11872	23		Field Nar			Business Unit Mid-Continent			ace UWI 02543460		Surface ChevNo PJ8995
Perforation	is									100			
Date	Perforation Type	Top (ftKB)	Btm (ftKB)	Phasing (°)	Gun Size (in)	Chg Sz	Charge Make	Carrier Make	Shot Dens (shots/ft)	Entered Shot Total	# Shots Misfired	Perf Comp	Com
6/8/2017	Shaped Charge	9,754.0	9,755.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 47
6/8/2017	Shaped Charge	9,778.0	9,779.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 47
6/8/2017	Shaped Charge	9,803.0	9,804.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 47
6/8/2017	Shaped Charge	9,828.0	9,829.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 46
6/8/2017	Shaped Charge	9,853.0	9,854.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 46
6/8/2017	Shaped Charge	9,878.0	9,879.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 46
6/8/2017	Shaped Charge	9,903.0	9,904.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 46
6/8/2017	Shaped Charge	9,928.0	9,929.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 46
6/8/2017	Shaped Charge	9,953.0	9,954.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 46
6/8/2017	Shaped Charge	9,978.0	9,979.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 46
6/8/2017	Shaped Charge	10,003.0	10,004.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 46
6/7/2017	Shaped Charge	10,028.0	10,029.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6		Halliburton	Stage 45
6/7/2017	Shaped Charge	10,053.0	10,054.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 45
6/7/2017	Shaped Charge	10,075.0	10,076.0		3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 45
6/7/2017	Shaped Charge	10,103.0	10,104.0		3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 45
6/7/2017	Shaped Charge	10,128.0	10,129.0		3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0			Halliburton	Stage 45
6/7/2017	Shaped Charge	10,153.0	10,154.0		3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 45
6/7/2017	Shaped Charge	10,178.0	10,179.0		3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 45
6/7/2017	Shaped Charge	10,203.0	10,204.0		3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3		Halliburton	Stage 45
6/7/2017	Shaped Charge	10,228.0	10,229.0	60	3 1/8	22.7	Services	Halliburton	6.0	6		Halliburton	Stage 44
6/7/2017	Shaped Charge	10,253.0	10,254.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 44
6/7/2017	Shaped Charge	10,277.0	10,278.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 44



Vell Name SALADO DRA	W WE 23 FED P25 001H	Lease NMNM11872	23		Field Nar JENNI			Business Unit Mid-Continent			ace UWI 02543460		Surface ChevNo PJ8995
erforation	S												
Date 5/7/2017	Perforation Type Shaped Charge	Top (ftKB) 10,303.0	Btm (ftKB) 10,304.0	Phasing (°)	Gun Size (in) 3 1/8	Chg Sz (g)	Charge Make Halliburton Energy	Carrier Make	Shot Dens (shots/ft)	Entered Shot Total	# Shots Misfired	Perf Comp Halliburton	Com Stage 44
7772017	Shaped Charge	10,303.0	10,304.0	90	3 1/6	22.1	Services	Halliburton	4.0	7	Ů	Trailiburtori	Stage 44
/7/2017	Shaped Charge	10,328.0	10,329.0	90	3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 44
/7/2017	Shaped Charge	10,350.0	10,351.0		3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 44
/7/2017	Shaped Charge	10,378.0	10,379.0		3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 44
/7/2017	Shaped Charge	10,396.0	10,397.0		3 1/8		Halliburton Energy Services	Halliburton	3.0	3		Halliburton	Stage 44
/6/2017	Shaped Charge	10,428.0	10,429.0		3 1/8		Halliburton Energy Services	Halliburton	6.0	6		Halliburton	Stage 43
/6/2017	Shaped Charge	10,453.0	10,454.0		3 1/8		Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 43
/6/2017	Shaped Charge	10,478.0	10,479.0		3 1/8	2	Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 43
/6/2017	Shaped Charge	10,503.0	10,504.0		3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 43
/6/2017	Shaped Charge	10,528.0	10,529.0		3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 43
/6/2017	Shaped Charge	10,553.0	10,554.0	V 6	3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 43
/6/2017	Shaped Charge	10,578.0	10,579.0		3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 43
/6/2017	Shaped Charge	10,603.0	10,604.0		3 1/8		Halliburton Energy Services	Halliburton	3.0	3		Halliburton	Stage 43
/6/2017	Shaped Charge	10,628.0	10,629.0		3 1/8		Halliburton Energy Services	Halliburton	6.0	6	1254	Halliburton	Stage 42
/6/2017	Shaped Charge	10,653.0	10,654.0		3 1/8		Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 42
/6/2017	Shaped Charge	10,678.0	10,679.0		3 1/8	en e	Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 42
/6/2017	Shaped Charge	10,703.0	10,704.0		3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 42
/6/2017	Shaped Charge	10,733.0	10,734.0		3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 42
/6/2017	Shaped Charge	10,753.0	10,754.0		3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 42
/6/2017	Shaped Charge	10,778.0	10,779.0	12.5	3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 42
/6/2017	Shaped Charge	10,803.0	10,804.0		3 1/8		Halliburton Energy Services	Halliburton	3.0	3	6 6 6	Halliburton	Stage 42
/6/2017	Shaped Charge	10,828.0	10,829.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 41



Vell Name SALADO DRA	W WE 23 FED P25 001H	Lease NMNM11872	23		Field Nar			Business Unit Mid-Continent			ace UWI 02543460		Surface ChevNo PJ8995
erforations	3												
Date	Perforation Type	Top (ftKB)	Btm (ftKB)	Phasing (°)	Gun Size (in)	Chg Sz (g)	Charge Make	Carrier Make	Shot Dens (shots/ft)	Entered Shot Total	# Shots Misfired	Perf Comp	Com
/6/2017	Shaped Charge	10,855.0	10,856.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 41
/6/2017	Shaped Charge	10,878.0	10,879.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 41
6/2017	Shaped Charge	10,903.0	10,904.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 41
/6/2017	Shaped Charge	10,928.0	10,929.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 41
/6/2017	Shaped Charge	10,953.0	10,954.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 41
6/6/2017	Shaped Charge	10,978.0	10,979.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 41
6/6/2017	Shaped Charge	11,003.0	11,004.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 41
6/5/2017	Shaped Charge	11,028.0	11,029.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 39
/5/2017	Shaped Charge	11,053.0	11,054.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 39
6/5/2017	Shaped Charge	11,078.0	11,079.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 39
3/5/2017	Shaped Charge	11,104.0	11,105.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 39
6/5/2017	Shaped Charge	11,128.0	11,129.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 39
3/5/2017	Shaped Charge	11,153.0	11,154.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 39
5/5/2017	Shaped Charge	11,174.0	11,175.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 39
3/5/2017	Shaped Charge	11,203.0	11,204.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 39
3/5/2017	Shaped Charge	11,228.0	11,229.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 39
8/5/2017	Shaped Charge	11,253.0	11,254.0	60	3 1/8	22.7	Services	Halliburton	5.0	5	0	Halliburton	Stage 39
5/5/2017	Shaped Charge	11,278.0	11,279.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 39
/5/2017	Shaped Charge	11,303.0	11,304.0	90	3 1/8	22.7	Services	Halliburton	4.0	4	0	Halliburton	Stage 39
5/5/2017	Shaped Charge	11,328.0	11,329.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 39
5/5/2017	Shaped Charge	11,353.0	11,354.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 39
6/5/2017	Shaped Charge	11,378.0	11,379.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 39



Vell Name SALADO DRA	W WE 23 FED P25 001H	Lease NMNM11872	23		Field Nar JENNI			Business Unit Mid-Continent			2543460		Surface ChevNo PJ8995
erforation	S						The Later Park Design Property of						
Date	Perforation Type	Top (ftKB)	Btm (ftKB)	Phasing (°)	Gun Size (in)	Chg Sz	Charge Make	Carrier Make	Shot Dens (shots/ft)	Entered Shot Total	# Shots Misfired	Perf Comp	Com
/5/2017	Shaped Charge	11,403.0	11,404.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 39
/4/2017	Shaped Charge	11,431.0	11,432.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 38
/4/2017	Shaped Charge	11,453.0	11,454.0	60	3 1/8		Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 38
/4/2017	Shaped Charge	11,478.0	11,479.0	60	3 1/8		Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 38
/4/2017	Shaped Charge	11,503.0	11,504.0	90	3 1/8		Halliburton Energy . Services	Halliburton	4.0	4		Halliburton	Stage 38
/4/2017	Shaped Charge	11,528.0	11,529.0	90	3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 38
6/4/2017	Shaped Charge	11,553.0	11,554.0	90	3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 38
6/4/2017	Shaped Charge	11,578.0	11,579.0	90	3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 38
6/4/2017	Shaped Charge	11,603.0	11,604.0	120	3 1/8		Halliburton Energy Services	Halliburton	3.0	3		Halliburton	Stage 38
6/4/2017	Shaped Charge	11,628.0	11,629.0	60	3 1/8		Services	Halliburton	6.0	6		Halliburton	Stage 37
6/4/2017	Shaped Charge	11,653.0	11,654.0	60	3 1/8		Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 37
6/4/2017	Shaped Charge	11,678.0	11,679.0	60	3 1/8		Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 37
3/4/2017	Shaped Charge	11,703.0	11,704.0	90	3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 37
6/4/2017	Shaped Charge	11,728.0	11,729.0	90	3 1/8		Halliburton Energy Services	Halliburton Halliburton	4.0	4		Halliburton Halliburton	Stage 37
6/4/2017	Shaped Charge	11,778.0	11,754.0	90	3 1/8		Halliburton Energy Services Halliburton Energy		4.0			Halliburton	Stage 37
6/4/2017	Shaped Charge Shaped Charge	11,778.0	11,779.0	120	3 1/8		Services Halliburton Energy	Halliburton Halliburton	3.0	3		Halliburton	Stage 37
14/2017	Shaped Charge	11,828.0	11,829.0	60	3 1/8		Services Halliburton Energy	Halliburton	6.0	6		Halliburton	Stage 36
3/4/2017	Shaped Charge	11,853.0	11,854.0	60	3 1/8		Services Halliburton Energy	Halliburton	5.0	5		Halliburton	Stage 36
6/4/2017	Shaped Charge	11,878.0	11.879.0	60	3 1/8		Services Halliburton Energy	Halliburton	5.0	5		Halliburton	Stage 36
6/4/2017	Shaped Charge	11,903.0	11,904.0	90	3 1/8		Services Halliburton Energy	Halliburton	4.0	4		Halliburton	Stage 36
		11,928.0	11,929.0	90	3 1/8		Services	Halliburton	4.0				
6/4/2017	Shaped Charge	11,928.01	11,929.0	90	3 1/8	22.1	Halliburton Energy Services	nailiburton	4.0	4	0	Halliburton	Stage 36



Well Name SALADO DRA	W WE 23 FED P25 001H	Lease NMNM11872	23		Field Nar JENNI			Business Unit Mid-Continent			2543460		Surface ChevNo PJ8995
Perforation	S									771			
Date 6/4/2017	Perforation Type Shaped Charge	Top (ftKB) 11,953.0	Btm (ftKB) 11,954.0	Phasing (°)	Gun Size (in) 3 1/8	Chg Sz (g) 22.7	Charge Make Halliburton Energy	Carrier Make Halliburton	Shot Dens (shots/ft) 4.0	Entered Shot Total	# Shots Misfired	Perf Comp Halliburton	Com Stage 36
6/4/2017	Shaped Charge	11,978.0	11,979.0	90	3 1/8	22.7	Services Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 36
6/4/2017	Shaped Charge	12,000.0	12,001.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 36
6/3/2017	Shaped Charge	12,028.0	12,029.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 35
6/3/2017	Shaped Charge	12,053.0	12,054.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 35
6/3/2017	Shaped Charge	12,078.0	12,079.0	60	3 1/8		Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 35
6/3/2017	Shaped Charge	12,105.0	12,106.0	90	3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 35
6/3/2017	Shaped Charge	12,128.0	12,129.0	90	3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 35
6/3/2017	Shaped Charge	12,153.0	12,154.0	90	3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 35
6/3/2017	Shaped Charge	12,178.0	12,179.0	90	3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 35
6/3/2017	Shaped Charge	12,203.0	12,204.0	120	3 1/8		Halliburton Energy Services	Halliburton	3.0	3		Halliburton	Stage 35
6/2/2017	Shaped Charge	12,229.0	12,230.0	60	3 1/8		Halliburton Energy Services	Halliburton	5.0	6		Halliburton	Stage 34
6/2/2017	Shaped Charge	12,253.0	12,254.0		3 1/8		Halliburton Energy Services	Halliburton	5.0	5		Halliburton Halliburton	Stage 34
6/2/2017	Shaped Charge Shaped Charge	12,278.0	12,279.0	90	3 1/8	22.7	Halliburton Energy Services Halliburton Energy	Halliburton	4.0	4		Halliburton	Stage 34
6/2/2017	Shaped Charge	12,303.0	12,304.0	90	3 1/8	22.7	Services Halliburton Energy	Halliburton	4.0	4	PER PAR	Halliburton	Stage 34
6/2/2017	Shaped Charge	12,353.0	12,354.0	90	3 1/8	22.7	Services	Halliburton	4.0	4		Halliburton	Stage 34
6/2/2017	Shaped Charge	12,378.0	12,379.0	90	3 1/8		Services Halliburton Energy	Halliburton	4.0	4	Molitic	Halliburton	Stage 34
6/2/2017	Shaped Charge	12,403.0	12,404.0	120	3 1/8		Services Halliburton Energy	Halliburton	3.0	3		Halliburton	Stage 34
6/2/2017	Shaped Charge	12,426.0	12,427.0	60	3 1/8	22.7	Services	Halliburton	6.0	6		Halliburton	Stage 33
6/2/2017	Shaped Charge	12,453.0	12,454.0	60	3 1/8	22.7	Services Halliburton Energy	Halliburton	5.0	5	0	Halliburton	Stage 33
6/2/2017	Shaped Charge	12,478.0	12,479.0	60	3 1/8	22.7	Services Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 33



Vell Name SALADO DRA	W WE 23 FED P25 001H	Lease NMNM11872	23		Field Nat			Business Unit Mid-Continent	1 7		ace UWI 02543460		Surface ChevNo PJ8995
erforation	s						Y Y						
Date	Perforation Type	Top (ftKB)	Btm (ftKB)	Phasing (°)	Gun Size (in)	Chg Sz (g)	Charge Make	Carrier Make	Shot Dens (shots/ft)	Entered Shot Total	# Shots Misfired	Perf Comp	Com
/2/2017	Shaped Charge	12,503.0	12,504.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 33
/2/2017	Shaped Charge	12,528.0	12,529.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 33
/2/2017	Shaped Charge	12,550.0	12,551.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 33
/2/2017	Shaped Charge	12,578.0	12,579.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 33
/2/2017	Shaped Charge	12,603.0	12,604.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 33
/1/2017	Shaped Charge	12,628.0	12,629.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 32
6/1/2017	Shaped Charge	12,653.0	12,654.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 32
3/1/2017	Shaped Charge	12,674.0	12,675.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 32
/1/2017	Shaped Charge	12,703.0	12,704.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 32
/1/2017	Shaped Charge	12,728.0	12,729.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 32
/1/2017	Shaped Charge	12,753.0	12,754.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 32
/1/2017	Shaped Charge	12,778.0	12,779.0		3 1/8	No.	Halliburton Energy Services	Halliburton	4.0			Halliburton	Stage 32
/1/2017	Shaped Charge	12,803.0	12,804.0		3 1/8		Halliburton Energy Services	Halliburton	3.0	3		Halliburton	Stage 32
3/31/2017	Shaped Charge	12,828.0	12,829.0		3 1/8		Halliburton Energy Services	Halliburton	6.0	6		Halliburton	Stage 31
5/31/2017	Shaped Charge	12,853.0	12,854.0		3 1/8		Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 31
3/31/2017	Shaped Charge	12,878.0	12,879.0		3 1/8		Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 31
/31/2017	Shaped Charge	12,903.0	12,904.0		3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 31
/31/2017	Shaped Charge	12,928.0	12,929.0		3 1/8		Halliburton Energy Services	Halliburton	4.0		0	Halliburton	Stage 31
/31/2017	Shaped Charge	12,953.0	12,954.0	3	3 1/8		Halliburton Energy Services	Halliburton	4.0			Halliburton	Stage 31
/31/2017	Shaped Charge	12,981.0	12,982.0		3 1/8		Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 31
/31/2017	Shaped Charge	13,003.0	13,004.0		3 1/8		Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 31
31/2017	Shaped Charge	13,028.0	13,029.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 30



Vell Name SALADO DRA	W WE 23 FED P25 001H	Lease NMNM11872	23		Field Nar JENNI			Business Unit Mid-Continent			2543460		Surface ChevNo PJ8995
erforation	S	N. W. State											
Date	Perforation Type	Top (ftKB)	Btm (ftKB)	Phasing (°)	Gun Size (in)	Chg Sz (g)	Charge Make	Carrier Make	Shot Dens (shots/ft)	Entered Shot Total	# Shots Misfired	Perf Comp	Com
/31/2017	Shaped Charge	13,053.0	13,054.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 30
31/2017	Shaped Charge	13,078.0	13,079.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 30
31/2017	Shaped Charge	13,100.0	13,101.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 30
31/2017	Shaped Charge	13,128.0	13,129.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 30
/31/2017	Shaped Charge	13,153.0	13,154.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 30
/31/2017	Shaped Charge	13,178.0	13,179.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 30
/31/2017	Shaped Charge	13,203.0	13,204.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 30
/30/2017	Shaped Charge	13,228.0	13,229.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 29
/30/2017	Shaped Charge	13,253.0	13,254.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 29
/30/2017	Shaped Charge	13,278.0	13,279.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 29
/30/2017	Shaped Charge	13,303.0	13,304.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 29
/30/2017	Shaped Charge	13,328.0	13,329.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 29
/30/2017	Shaped Charge	13,354.0	13,355.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 29
/30/2017	Shaped Charge	13,378.0	13,379.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 29
3/30/2017	Shaped Charge	13,403.0	13,404.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 29
/29/2017	Shaped Charge	13,428.0	13,429.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 28
/29/2017	Shaped Charge	13,453.0	13,454.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 28
/29/2017	Shaped Charge	13,476.0	13,477.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 28
/29/2017	Shaped Charge	13,503.0	13,504.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 28
/29/2017	Shaped Charge	13,528.0	13,529.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 28
/29/2017	Shaped Charge	13,553.0	13,554.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 28
5/29/2017	Shaped Charge	13,578.0	13,579.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 28



Well Name SALADO DRA	W WE 23 FED P25 001H	Lease NMNM11872	23		Field Nar JENNI			Business Unit Mid-Continent			ace UWI)2543460		Surface ChevNo PJ8995
erforation	s												
Date	Perforation Type	Top (ftKB)	Btm (ftKB)	Phasing (°)	Gun Size (in)	Chg Sz	Charge Make	Carrier Make	Shot Dens (shots/ft)	Entered Shot Total	# Shots Misfired	Perf Comp	Com
/29/2017	Shaped Charge	13,603.0	13,604.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 28
/29/2017	Shaped Charge	13,628.0	13,629.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 27
/29/2017	Shaped Charge	13,653.0	13,654.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 27
/29/2017	Shaped Charge	13,678.0	13,679.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 27
/29/2017	Shaped Charge	13,703.0	13,704.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 27
/29/2017	Shaped Charge	13,728.0	13,729.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 27
/29/2017	Shaped Charge	13,753.0	13,754.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 27
5/29/2017	Shaped Charge	13,778.0	13,779.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 27
/29/2017	Shaped Charge	13,800.0	13,801.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 27
5/27/2017	Shaped Charge	13,828.0	13,829.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 26
5/27/2017	Shaped Charge	13,853.0	13,854.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 26
5/27/2017	Shaped Charge	13,878.0	13,879.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 26
5/27/2017	Shaped Charge	13,903.0	13,904.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 26
5/27/2017	Shaped Charge	13,928.0	13,929.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 26
5/27/2017	Shaped Charge	13,953.0	13,954.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 26
5/27/2017	Shaped Charge	13,978.0	13,979.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 26
5/27/2017	Shaped Charge	14,003.0	14,004.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 26
5/27/2017	Shaped Charge	14,030.0	14,031.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 25
5/27/2017	Shaped Charge	14,053.0	14,054.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 25
3/27/2017	Shaped Charge	14,078.0	14,079.0	60	3 1/8	22.7	Services	Halliburton	5.0	5	0	Halliburton	Stage 25
5/27/2017	Shaped Charge	14,103.0	14,104.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 25
5/27/2017	Shaped Charge	14,128.0	14,129.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 25

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Well Name SALADO DRA	W WE 23 FED P25 001H	Lease NMNM11872	23		Field Nar	ne NGS		Business Unit Mid-Continent			ace UWI 02543460		Surface ChevNo PJ8995
Perforations	S		7.00									iden valor	
Date	Perforation Type	Top (ftKB)	Btm (ftKB)	Phasing (°)	Gun Size (in)	Chg Sz (g)	Charge Make	Carrier Make	Shot Dens (shots/ft)	Entered Shot Total	# Shots Misfired	Perf Comp	Com
1/27/2017	Shaped Charge	14,153.0	14,154.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 25
/27/2017	Shaped Charge	14,178.0	14,179.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 25
/27/2017	Shaped Charge	14,203.0	14,204.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 25
/26/2017	Shaped Charge	14,228.0	14,229.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 24
/26/2017	Shaped Charge	14,253.0	14,254.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 24
/26/2017	Shaped Charge	14,278.0	14,279.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 24
/26/2017	Shaped Charge	14,303.0	14,304.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 24
5/26/2017	Shaped Charge	14,328.0	14,329.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 24
/26/2017	Shaped Charge	14,353.0	14,354.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 24
5/26/2017	Shaped Charge	14,378.0	14,379.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 24
5/26/2017	Shaped Charge	14,400.0	14,401.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 24
5/25/2017	Shaped Charge	14,428.0	14,429.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 23
/25/2017	Shaped Charge	14,453.0	14,454.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 23
5/25/2017	Shaped Charge	14,478.0	14,479.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 23
5/25/2017	Shaped Charge	14,503.0	14,504.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 23
5/25/2017	Shaped Charge	14,528.0	14,529.0		3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 23
5/25/2017	Shaped Charge	14,553.0	14,554.0		3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 23
5/25/2017	Shaped Charge	14,578.0	14,579.0	- 1	3 1/8	22.7	Services	Halliburton	4.0	4	0	Halliburton	Stage 23
/25/2017	Shaped Charge	14,603.0	14,604.0		3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3		Halliburton	Stage 23
/25/2017	Shaped Charge	14,628.0	14,629.0	1	3 1/8	22.7	Services	Halliburton	6.0	6	0	Halliburton	Stage 22
/25/2017	Shaped Charge	14,650.0	14,651.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 22
5/25/2017	Shaped Charge	14,678.0	14,679.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 22



/ell Name ALADO DRA	W WE 23 FED P25 001H	Lease NMNM11872	23		Field Nar			Business Unit Mid-Continent			2543460		PJ8995
erforations							grane it in the same		1000				
Date	Perforation Type	Top (ftKB)	Btm (ftKB)	Phasing (°)	Gun Size (in)	Chg Sz (g)	Charge Make	Carrier Make	Shot Dens (shots/ft)	Entered Shot Total	# Shots Misfired	Perf Comp	Com
25/2017	Shaped Charge	14,703.0	14,704.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 22
25/2017	Shaped Charge	14,728.0	14,729.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 22
25/2017	Shaped Charge	14,753.0	14,754.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 22
25/2017	Shaped Charge	14,774.0	14,775.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 22
25/2017	Shaped Charge	14,803.0	14,804.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 22
24/2017	Shaped Charge	14,828.0	14,829.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 21
24/2017	Shaped Charge	14,853.0	14,854.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 21
24/2017	Shaped Charge	14,878.0	14,879.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 21
24/2017	Shaped Charge	14,904.0	14,905.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 21
24/2017	Shaped Charge	14,928.0	14,929.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 21
24/2017	Shaped Charge	14,953.0	14,954.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 21
24/2017	Shaped Charge	14,978.0	14,979.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 21
24/2017	Shaped Charge	15,003.0	15,004.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 21
20/2017	Shaped Charge	15,028.0	15,029.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 20
20/2017	Shaped Charge	15,053.0	15,054.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 20
20/2017	Shaped Charge	15,078.0	15,079.0	60	3 1/8	22.7	Services	Halliburton	5.0	5		Halliburton	Stage 20
20/2017	Shaped Charge	15,101.0	15,102.0	90	3 1/8	22.7	Services	Halliburton	4.0	4	TO A	Halliburton	Stage 20
20/2017	Shaped Charge	15,128.0	15,129.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 20
20/2017	Shaped Charge	15,153.0	15,154.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 20
20/2017	Shaped Charge	15,178.0	15,179.0	90	3 1/8	22.7	Services	Halliburton	4.0	4		Halliburton	Stage 20
20/2017	Shaped Charge	15,203.0	15,204.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 20
20/2017	Shaped Charge	15,228.0	15,229.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 19



Well Name SALADO DRA	W WE 23 FED P25 001H	Lease NMNM11872	23		Field Nar		11 m	Business Unit Mid-Continent		Surf 300	ace UWI 02543460		Surface ChevNo PJ8995
Perforations	3				1 State 1				J				KAN AL STATE
Date	Perforation Type	Top (ftKB)	Btm (ftKB)	Phasing (°)	Gun Size (in)	Chg Sz (g)	Charge Make	Carrier Make	Shot Dens (shots/ft)	Entered Shot Total	# Shots Misfired	Perf Comp	Com
5/20/2017	Shaped Charge	15,253.0	15,254.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 19
5/20/2017	Shaped Charge	15,279.0	15,280.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 19
5/20/2017	Shaped Charge	15,303.0	15,304.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 19
5/20/2017	Shaped Charge	15,328.0	15,329.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 19
5/20/2017	Shaped Charge	15,353.0	15,354.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 19
5/20/2017	Shaped Charge	15,378.0	15,379.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 19
5/20/2017	Shaped Charge	15,400.0	15,401.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 19
5/19/2017	Shaped Charge	15,428.0	15,429.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6		Halliburton	Stage 18
5/19/2017	Shaped Charge	15,453.0	15,454.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 18
5/19/2017	Shaped Charge	15,478.0	15,479.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 18
5/19/2017	Shaped Charge	15,503.0	15,504.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 18
5/19/2017	Shaped Charge	15,524.0	15,525.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 18
5/19/2017	Shaped Charge	15,553.0	15,554.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 18
5/19/2017	Shaped Charge	15,578.0	15,579.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 18
5/19/2017	Shaped Charge	15,603.0	15,604.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3		Halliburton	Stage 18
5/19/2017	Shaped Charge	15,628.0	15,629.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6		Halliburton	Stage 17
5/19/2017	Shaped Charge	15,654.0	15,655.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 17
5/19/2017	Shaped Charge	15,678.0	15,679.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 17
5/19/2017	Shaped Charge	15,703.0	15,704.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 17
5/19/2017	Shaped Charge	15,728.0	15,729.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 17
5/19/2017	Shaped Charge	15,753.0	15,754.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 17
5/19/2017	Shaped Charge	15,780.0	15,781.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 17



Well Name SALADO DRA	W WE 23 FED P25 001H	Lease NMNM11872	23		Field Nat			Business Unit Mid-Continent			ace UWI)2543460		Surface ChevNo PJ8995
Perforation	S	/**Y									44 P. 1		
Date	Perforation Type	Top (ftKB)	Btm (ftKB)	Phasing (°)	Gun Size (in)	Chg Sz (g)	Charge Make	Carrier Make	Shot Dens (shots/ft)	Entered Shot Total	# Shots Misfired	Perf Comp	Com
5/19/2017	Shaped Charge	15,803.0	15,804.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 17
5/19/2017	Shaped Charge	15,828.0	15,829.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 16
/19/2017	Shaped Charge	15,853.0	15,854.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 16
/19/2017	Shaped Charge	15,878.0	15,879.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 16
/19/2017	Shaped Charge	15,901.0	15,902.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 16
5/19/2017	Shaped Charge	15,928.0	15,929.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 16
5/19/2017	Shaped Charge	15,953.0	15,954.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 16
5/19/2017	Shaped Charge	15,978.0	15,979.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 16
/19/2017	Shaped Charge	16,001.0	16,002.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 16
5/18/2017	Shaped Charge	16,032.0	16,033.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 15
5/18/2017	Shaped Charge	16,053.0	16,054.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 15
5/18/2017	Shaped Charge	16,078.0	16,079.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 15
5/18/2017	Shaped Charge	16,103.0	16,104.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 15
5/18/2017	Shaped Charge	16,128.0	16,129.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 15
5/18/2017	Shaped Charge	16,150.0	16,151.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 15
5/18/2017	Shaped Charge	16,178.0	16,179.0		3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 15
5/18/2017	Shaped Charge	16,203.0	16,204.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3		Halliburton	Stage 15
5/18/2017	Shaped Charge	16,228.0	16,229.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 14
5/18/2017	Shaped Charge	16,253.0	16,254.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 14
5/18/2017	Shaped Charge	16,278.0	16,279.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 14
5/18/2017	Shaped Charge	16,303.0	16,304.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 14
5/18/2017	Shaped Charge	16,328.0	16,329.0	90	3 1/8	-22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 14



Well Name SALADO DRAW WE 23 FED P25 001H Lease NMNM118723			23		Field Nar			Business Unit Mid-Continent			Surface ChevNo PJ8995		
Perforations			2017										
Date 5/18/2017	Perforation Type Shaped Charge	Top (ftKB) 16,353.0	Btm (ftKB) 16,354.0	Phasing (°)	Gun Size (in) 3 1/8	Chg Sz (g) 22.7	Charge Make Halliburton Energy	Carrier Make Halliburton	Shot Dens (shots/ft) 4.0	Entered Shot Total	# Shots Misfired	Perf Comp Halliburton	Com Stage 14
5/18/2017	Shaped Charge	16,378.0	16,379.0	90	3 1/8	22.7	Services Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 14
5/18/2017	Shaped Charge	16,400.0	16,401.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 14
5/18/2017	Shaped Charge	16,428.0	16,429.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6		Halliburton	Stage 13
5/18/2017	Shaped Charge	16,453.0	16,454.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 13
5/18/2017	Shaped Charge	16,478.0	16,479.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 13
5/18/2017	Shaped Charge	16,503.0	16,504.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 13
5/18/2017	Shaped Charge	16,530.0	16,531.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton Halliburton	Stage 13
5/18/2017	Shaped Charge Shaped Charge	16,553.0	16,554.0	90	3 1/8	22.7	Halliburton Energy Services Halliburton Energy	Halliburton Halliburton	4.0	4		Halliburton	Stage 13
5/18/2017	Shaped Charge	16,603.0	16,604.0	120	3 1/8	22.7	Services Halliburton Energy	Halliburton	3.0	3		Halliburton	Stage 13
5/17/2017	Shaped Charge	16,628.0	16,629.0	60	3 1/8	22.7	Services Halliburton Energy	Halliburton	6.0	6		Halliburton	Stage 12
5/17/2017	Shaped Charge	16,653.0	16,654.0	60	3 1/8	22.7	Services Halliburton Energy	Halliburton	5.0	5		Halliburton	Stage 12
5/17/2017	Shaped Charge	16,678.0	16,679.0	60	3 1/8	22.7	Services Halliburton Energy	Halliburton	5.0	5	0	Halliburton	Stage 12
5/17/2017	Shaped Charge	16,703.0	16,704.0	90	3 1/8	22.7	Services Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 12
5/17/2017	Shaped Charge	16,728.0	16,729.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 12
5/17/2017	Shaped Charge	16,753.0	16,754.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 12
5/17/2017	Shaped Charge	16,776.0	16,777.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 12
5/17/2017	Shaped Charge	16,803.0	16,804.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 12
5/17/2017	Shaped Charge	16,830.0	16,831.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6		Halliburton	Stage 11
5/17/2017	Shaped Charge	16,853.0	16,854.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 11
5/17/2017	Shaped Charge	16,878.0	16,879.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 11

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Vell Name SALADO DRA	W WE 23 FED P25 001H	Lease NMNM11872	23		Field Nar			Business Unit Mid-Continent	41,		ace UWI)2543460	10 10 10 10 10 10 10 10 10 10 10 10 10 1	Surface ChevNo PJ8995
Perforations											7		
Date 5/17/2017	Perforation Type Shaped Charge	Top (ftKB) 16,903.0	Btm (ftKB) 16,904.0	Phasing (°)	Gun Size (in)	Chg Sz (g) 22.7	Charge Make Halliburton Energy	Carrier Make Halliburton	Shot Dens (shots/ft)	Entered Shot Total	# Shots Misfired	Perf Comp Halliburton	Com Stage 11
/1//2017	Shaped Charge	10,903.0	10,904.0	90	3 1/6	22.1	Services	Halliburton	4.0	-		Halliburton	Stage 11
/17/2017	Shaped Charge	16,928.0	16,929.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 11
17/2017	Shaped Charge	16,950.0	16,951.0	90	3 1/8	22.7	Services	Halliburton	4.0	4		Halliburton	Stage 11
/17/2017	Shaped Charge	16,978.0	16,979.0	90	3 1/8	1	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 11
/17/2017	Shaped Charge	17,003.0	17,004.0	120	3 1/8		Halliburton Energy Services	Halliburton	3.0	3		Halliburton	Stage 11
/17/2017	Shaped Charge	17,028.0	17,029.0	60	3 1/8	22.7	Services	Halliburton	6.0			Halliburton	Stage 10
/17/2017	Shaped Charge	17,053.0	17,054.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0			Halliburton	Stage 10
/17/2017	Shaped Charge	17,078.0	17,079.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0			Halliburton	Stage 10
17/2017	Shaped Charge	17,103.0	17,104.0	90	3 1/8	22.7	Services	Halliburton	4.0	4		Halliburton	Stage 10
/17/2017	Shaped Charge	17,128.0	17,129.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 10
/17/2017	Shaped Charge	17,153.0	17,154.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 10
/17/2017	Shaped Charge	17,178.0	17,179.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 10
/17/2017	Shaped Charge	17,204.0	17,205.0	120	3 1/8	22.7	Services	Halliburton	3.0	3		Halliburton	Stage 10
/17/2017	Shaped Charge	17,228.0	17,229.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6		Halliburton	Stage 9
/17/2017	Shaped Charge	17,253.0	17,254.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0			Halliburton	Stage 9
/17/2017	Shaped Charge	17,278.0	17,279.0		3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	§		Halliburton	Stage 9
/17/2017	Shaped Charge	17,303.0	17,304.0	90	3 1/8	22.7	Services	Halliburton	4.0			Halliburton	Stage 9
/17/2017	Shaped Charge	17,328.0	17,329.0	90	3 1/8	22.7	Services	Halliburton	4.0	4	100	Halliburton	Stage 9
/17/2017	Shaped Charge	17,353.0	17,354.0	90	3 1/8	22.7	Services	Halliburton	4.0	4		Halliburton	Stage 9
/17/2017	Shaped Charge	17,378.0	17,379.0	90	3 1/8		Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 9
/17/2017	Shaped Charge	17,403.0	17,404.0	120	3 1/8		Halliburton Energy Services	Halliburton	3.0			Halliburton	Stage 9
/16/2017	Shaped Charge	17,428.0	17,429.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 8



Vell Name SALADO DRAV	N WE 23 FED P25 001H	Lease NMNM11872	23		Field Nar			Business Unit Mid-Continent	4		ace UWI 02543460	Surface ChevNo PJ8995		
erforations														
Date	Perforation Type	Top (ftKB)	Btm (ftKB)	Phasing (°)	Gun Size (in)	Chg Sz	Charge Make	Carrier Make	Shot Dens (shots/ft)	Entered Shot Total	# Shots Misfired	Perf Comp	Com	
5/16/2017	Shaped Charge	17,452.0	17,453.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 8	
6/16/2017	Shaped Charge	17,478.0	17,479.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 8	
/16/2017	Shaped Charge	17,503.0	17,504.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 8	
/16/2017	Shaped Charge	17,528.0	17,529.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 8	
5/16/2017	Shaped Charge	17,553.0	17,554.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 8	
5/16/2017	Shaped Charge	17,579.0	17,580.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 8	
5/16/2017	Shaped Charge	17,599.0	17,600.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 8	
5/14/2017	Shaped Charge	17,628.0	17,629.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 7	
/14/2017	Shaped Charge	17,653.0	17,654.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 7	
5/14/2017	Shaped Charge	17,678.0	17,679.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 7	
5/14/2017	Shaped Charge	17,703.0	17,704.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 7	
5/14/2017	Shaped Charge	17,728.0	17,729.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 7	
5/14/2017	Shaped Charge	17,753.0	17,754.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 7	
3/14/2017	Shaped Charge	17,778.0	17,779.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 7	
5/14/2017	Shaped Charge	17,803.0	17,804.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 7	
5/14/2017	Shaped Charge	17,828.0	17,829.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 6	
5/14/2017	Shaped Charge	17,853.0	17,854.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 6	
5/14/2017	Shaped Charge	17,878.0	17,879.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 6	
/14/2017	Shaped Charge	17,903.0	17,904.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 6	
/14/2017	Shaped Charge	17,928.0	17,929.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 6	
/14/2017	Shaped Charge	17,950.0	17,951.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 6	
5/14/2017	Shaped Charge	17,978.0	17,979.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 6	

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/ell Name ALADO DRA	W WE 23 FED P25 001H	Lease NMNM11872	23		Field Nan			Business Unit Mid-Continent			ace UWI 02543460		Surface ChevNo PJ8995
erforations	3 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3							No. 10 March 1980					
Date	Perforation Type	Top (ftKB)	Btm (ftKB)	Phasing (°)	Gun Size (in)	Chg Sz (g)	Charge Make	Carrier Make	Shot Dens (shots/ft)	Entered Shot Total	# Shots Misfired	Perf Comp	Com
14/2017	Shaped Charge	18,003.0	18,004.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 6
13/2017	Shaped Charge	18,028.0	18,029.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 5
13/2017	Shaped Charge	18,053.0	18,054.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 5
13/2017	Shaped Charge	18,078.0	18,079.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 5
13/2017	Shaped Charge	18,103.0	18,104.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 5
13/2017	Shaped Charge	18,128.0	18,129.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 5
13/2017	Shaped Charge	18,153.0	18,154.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 5
13/2017	Shaped Charge	18,178.0	18,179.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 5
13/2017	Shaped Charge	18,203.0	18,204.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 5
13/2017	Shaped Charge	18,228.0	18,229.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 4
13/2017	Shaped Charge	18,253.0	18,254.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 4
13/2017	Shaped Charge	18,275.0	18,276.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 4
13/2017	Shaped Charge	18,303.0	18,304.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 4
13/2017	Shaped Charge	18,328.0	18,329.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 4
13/2017	Shaped Charge	18,353.0	18,354.0		3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 4
13/2017	Shaped Charge	18,378.0	18,379.0		3 1/8	22.7	Services	Halliburton	4.0	4		Halliburton	Stage 4
13/2017	Shaped Charge	18,400.0	18,401.0		3 1/8	22.7	Services	Halliburton	3.0			Halliburton	Stage 4
12/2017	Shaped Charge	18,428.0	18,429.0		3 1/8	22.7	Services	Halliburton	6.0	6		Halliburton	Stage 3
12/2017	Shaped Charge	18,453.0	18,454.0		3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5		Halliburton	Stage 3
12/2017	Shaped Charge	18,478.0	18,479.0		3 1/8	22.7	Services	Halliburton	5.0	5		Halliburton	Stage 3
12/2017	Shaped Charge	18,503.0	18,504.0		3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4		Halliburton	Stage 3
/12/2017	Shaped Charge	18,528.0	18,529.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 3



Vell Name ALADO DRAW WE 23 FED P25 001H Lease NMNM118723			23	7	Field Nat			Business Unit Mid-Continent	1 2 30	Surfa 300		Surface ChevNo PJ8995	
erforation	S								12				
Date	Perforation Type	Top (ftKB)	Btm (ftKB)	Phasing (°)	Gun Size (in)	Chg Sz	Charge Make	Carrier Make	Shot Dens (shots/ft)	Entered Shot Total	# Shots Misfired	Perf Comp	Com
/12/2017	Shaped Charge	18,553.0	18,554.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 3
/12/2017	Shaped Charge	18,578.0	18,579.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 3
/12/2017	Shaped Charge	18,603.0	18,604.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 3
/12/2017	Shaped Charge	18,628.0	18,629.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	6.0	6	0	Halliburton	Stage 2
/12/2017	Shaped Charge	18,653.0	18,654.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 2
/12/2017	Shaped Charge	18,678.0	18,679.0	60	3 1/8	22.7	Halliburton Energy Services	Halliburton	5.0	5	0	Halliburton	Stage 2
/12/2017	Shaped Charge	18,703.0	18,704.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 2
/12/2017	Shaped Charge	18,728.0	18,729.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 2
/12/2017	Shaped Charge	18,753.0	18,754.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 2
/12/2017	Shaped Charge	18,778.0	18,779.0	90	3 1/8	22.7	Halliburton Energy Services	Halliburton	4.0	4	0	Halliburton	Stage 2
/12/2017	Shaped Charge	18,803.0	18,804.0	120	3 1/8	22.7	Halliburton Energy Services	Halliburton	3.0	3	0	Halliburton	Stage 2
/5/2017	Shaped Charge	18,828.0	18,829.0	120	3 1/8	22.7	Titan Specialties Inc.	Geodynamics	3.0	3	0	Weatherford	Stage 1
/5/2017	Shaped Charge	18,853.0	18,854.0	90	3 1/8	22.7	Titan Specialties Inc.	Geodynamics	4.0	4	0	Weatherford	Stage 1
/5/2017	Shaped Charge	18,878.0	18,879.0	90	3 1/8	22.7	Titan Specialties Inc.	Geodynamics	4.0	4	0	Weatherford	Stage 1
/5/2017	Shaped Charge	18,903.0	18,904.0	90	3 1/8	22.7	Titan Specialties Inc.	Geodynamics	4.0	4	0	Weatherford	Stage 1
/5/2017	Shaped Charge	18,928.0	18,929.0	90	3 1/8	22.7	Titan Specialties Inc.	Geodynamics	4.0	4	0	Weatherford	Stage 1
/5/2017	Shaped Charge	18,953.0	18,954.0	60	3 1/8	22.7	Titan Specialties Inc.	Geodynamics	5.0	5	0	Weatherford	Stage 1
/5/2017	Shaped Charge	18,978.0	18,979.0	60	3 1/8	22.7	Titan Specialties Inc.	Geodynamics	5.0	5	0	Weatherford	Stage 1
/5/2017	Shaped Charge	19,003.0	19,004.0	60	3 1/8	22.7	Titan Specialties	Geodynamics	6.0	6	0	Weatherford	Stage 1