

30-015-42479



Job Number: SVM0-140946
 Company: BOPCO, LP
 Lease/Well: Big Eddy Unit D14 270H
 Location: Eddy County, NM
 Rig Name: Latshaw #18
 RKB: 30'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 7.18°
 Grid: East To Grid North
 File name: S:\2014SU-11BOPCO\MOIBIGEDD-1\DI4270H.SVY
 Date/Time: 15-Jul-14 / 13:50
 Curve Name: Surface - 686' M.D. (Rate Gyro)

CONFIDENTIAL

MS SURVEY

WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method

Vertical Section Plane .00

Vertical Section Referenced to Wellhead

Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
 Surface MD to 686' MD is, to the best of
 our knowledge, a true and accurate account of the
 well bore.
 Harley Patterson
 MS Energy Services
 Date: 7/15/14

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
101.00	.72	334.29	101.00	.57	-.28	.57	.63	334.29	.71
197.00	.98	356.00	196.99	1.93	-.59	1.93	2.02	342.92	.43
294.00	.81	354.26	293.98	3.44	-.72	3.44	3.52	348.18	.18
393.00	.44	27.74	392.97	4.48	-.61	4.48	4.52	352.19	.51
490.00	.41	13.04	489.97	5.14	-.36	5.14	5.16	355.97	.12
587.00	.34	5.16	586.96	5.77	-.26	5.77	5.77	357.44	.09
Last Survey Depth Recorded									
685.00	.28	7.16	684.96	6.30	-.20	6.30	6.30	358.16	.06