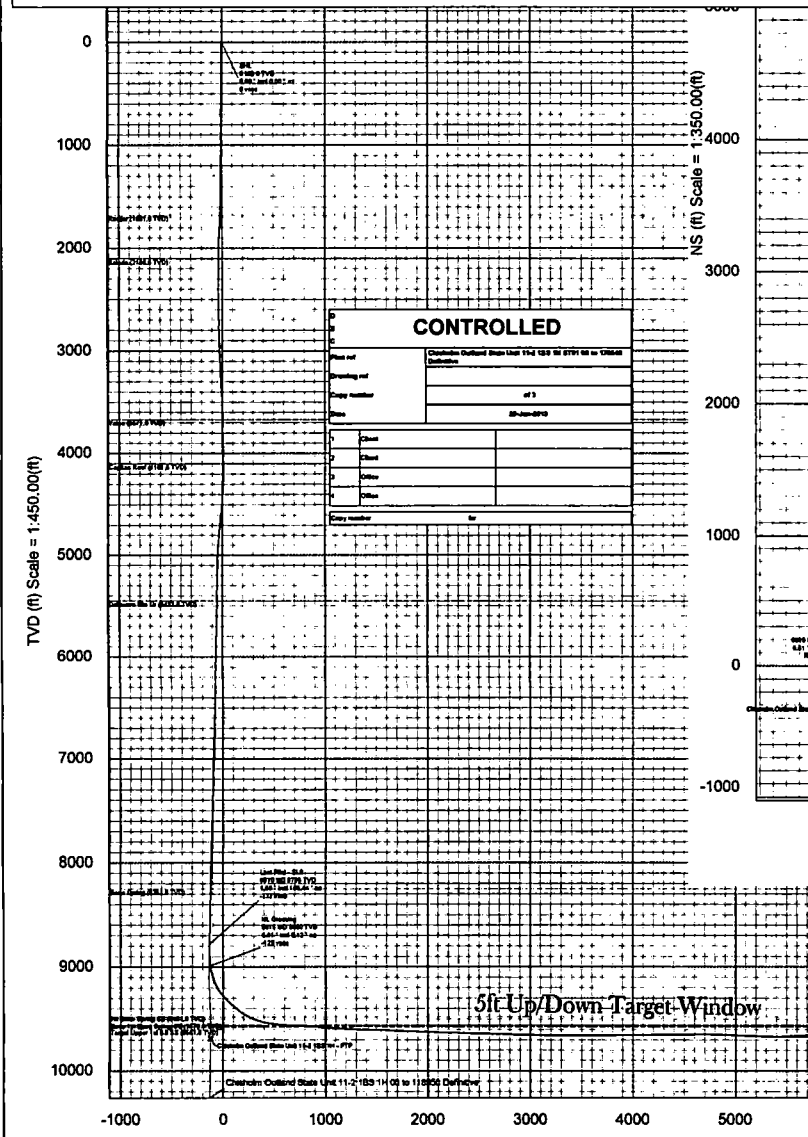
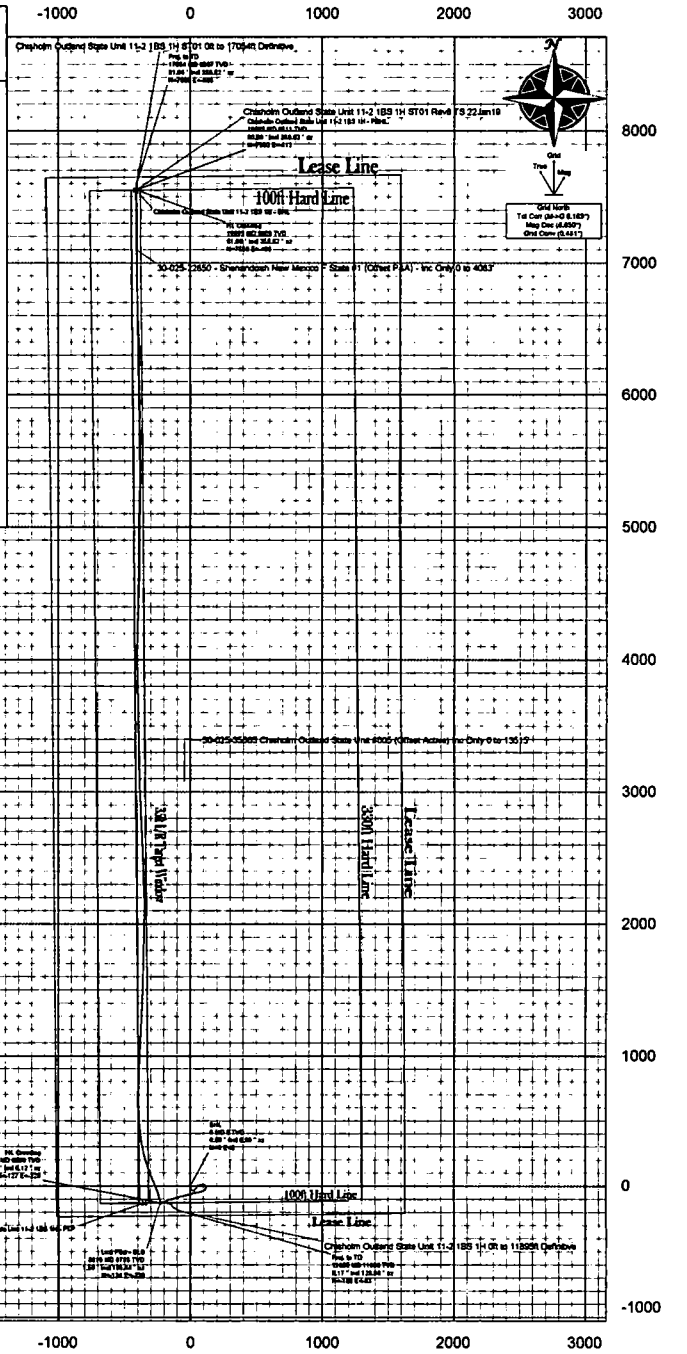


Borehole: ST01	Well: Outland State Unit 11-2 1BS 1H	Field: NM Lea County (NAD 83)	Structure: Chisholm Outland State Unit 11-2 1BS 1H
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Gravity & Magnetic Parameters Model: HDGM 2019 Dip: 60.86° Date: 02-Jan-2019 MagDec: 6.85° FS: 48082.0mT Gravity FS: 958.43mgal (9.5665 Based)	Surface Location NAD83 New Mexico State Plane, Declared Zone, US Feet Lat: N 32 29 12.83 Lon: W 103 29 14.82 Northing: 542024.027MUS Easting: 817803.637MUS Grid Conv: 6.4813" Scale Fact: 0.9999965	Well Information Well ID: Outland State Unit 11-2 1BS 1H TVD Ref: RKB = 51R (JDC 7)(3701.87 above MSL) Plan: Chisholm Outland State Unit 11-2 1BS 1H ST01 01 to 17064ft Definitive
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Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLB
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Last Pbit - SLB	8810.00	1.50	185.44	8785.49	-132.24	-134.17	-229.80	0.46
H. Crossing	8015.00	6.81	0.12	8980.21	-125.46	-127.37	-237.51	7.35
H. Crossing	16805.00	91.06	359.82	9608.56	7653.14	7650.01	-404.39	0.00
Proj. to TD	17054.00	91.06	359.82	9607.47	7612.13	7609.00	-404.57	0.00



Vertical Section (ft) Azim = 359.52° Scale = 1:450.00(ft) Origin = 0N/S, 0E/W

Chisholm Outland State Unit 11-2 1BS 1H ST01 0ft to 17054ft Definitive Survey Report (Def Survey)

Report Date: January 28, 2019 - 08:54 AM
Client: Chisholm Energy Operating, LLC
Field: NM Lea County (NAD 83)
Structure / Slot: Chisholm Outland State Unit 11-2 1BS 1H / Outland State Unit 11-2 1BS 1H
Well: Outland State Unit 11-2 1BS 1H
Borehole: ST01
UWI / AP#: Unknown / 30-025-45222-01
Survey Name: Chisholm Outland State Unit 11-2 1BS 1H ST01 0ft to 17054ft Definitive
Survey Date: January 03, 2019
Tori / AHD / ODI / ERD Ratio: 245.558 / 8332.386 R / 6.557 / 0.862
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 29' 12.82781" W 103° 26' 14.51832"
Location Grid N/E Y/X: N 542024.020 R/U.S. E 817603.690 R/U.S.
CRS Grid Convergence Angle: 0.4813 *
Grid Scale Factor: 0.9999965
Version / Patch: 2.10.753.0
Gravimetry: Gravity Model: GARM
Total Gravity Field Strength: 48082.060 nT
Magnetic Dip Angle: 60.365 *
Declination Date: January 02, 2019
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.4813 *
Total Corr Mag North -> Grid North: 6.1692 *
Local Coord Referenced To: Structure Reference Point

Table with columns: Comments, MD (ft), Incl (°), Azim Grid (°), TVD (ft), VSEC (ft), NS (ft), EW (ft), Closure (ft), Closure Azimuth (ft), DLS (ft/100ft), Northing (ft), Easting (ft), Latitude (N/S * °), Longitude (E/W * °)

...ST01Chisholm Outland State Unit 11-2 1BS 1H ST01 0ft to 17054ft Definitive

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLB (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ° ' '')	Longitude (E/W ° ° ' '')
	16498.00	90.95	0.12	9616.19	7056.21	7053.08	-402.78	7064.57	356.73	0.38	549077.06	817200.91	N 32 30 22.65	W 103 26 18.53
	16592.00	90.95	359.97	9614.64	7150.19	7147.07	-402.70	7158.40	356.78	0.16	549171.05	817200.99	N 32 30 23.58	W 103 26 18.52
	16687.00	90.80	359.16	9613.18	7245.18	7242.05	-403.43	7253.28	356.81	0.87	549268.03	817200.27	N 32 30 24.52	W 103 26 18.52
	16781.00	90.80	359.88	9611.87	7339.17	7338.04	-404.21	7347.17	356.85	0.77	549360.02	817199.48	N 32 30 25.45	W 103 26 18.52
	16875.00	90.80	0.09	9610.56	7433.16	7430.03	-404.24	7441.02	356.89	0.22	549454.01	817199.45	N 32 30 26.38	W 103 26 18.51
	16971.00	91.06	359.82	9609.00	7529.14	7526.02	-404.31	7536.87	356.92	0.39	549550.00	817199.38	N 32 30 27.33	W 103 26 18.50
HL Crossing	16988.00	91.06	359.82	9608.56	7553.14	7550.01	-404.39	7560.84	356.93	0.00	549573.99	817199.30	N 32 30 27.56	W 103 26 18.50
Prod. to TD	17054.00	91.06	359.82	9607.47	7612.13	7609.00	-404.57	7619.75	356.96	0.00	549632.98	817199.12	N 32 30 28.15	W 103 26 18.50

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	31.000	1/88.425	30.000	30.000	NAL_MWD_1.0_DEG-Depth Only	ST01 / Chisholm Outland State Unit 11-2 1BS 1H ST01 0ft to 17054ft Definitive
	1	31.000	31.000	Act Strs	30.000	30.000	NAL_MWD_1.0_DEG-Depth Only	ST01 / Chisholm Outland State Unit 11-2 1BS 1H ST01 0ft to 17054ft Definitive
	1	31.000	17054.000	Act Strs	30.000	30.000	NAL_MWD_1.0_DEG	ST01 / Chisholm Outland State Unit 11-2 1BS 1H ST01 0ft to