

Results of Directional Survey

API number:	30-025-40843		
OGRID:		Operator:	GMT EXPLORATION COMPANY LLC
		Property:	JAMALBERRY # 1H

surface	ULSTR:	M	16	T	21S	R	34E
				150	FSL	380	FWL

BH Loc	ULSTR:	D	16	T	21S	R	34E
15407	MD	10836.2	TVD	328	FNL	387	FWL
				4952	FSL		

Top Perf/OH	ULSTR:	M	16	T	21S	R	34E
11352	MD	10878.4	TVD	899	FSL	1129	FWL

Bot Perf/OH	ULSTR:	D	16	T	21S	R	34E
15293	MD	10836.1	TVD	442	FNL	363	FWL
				4838	FSL		

	MD	N/S	E/W	VD
	11350	747.16	7.32	10878.51
TOP PERFS/OH	11352	749.16	7.30	10878.41
	11445	842.04	6.37	10873.93
	15226	4621.33	-12.87	10836.94
BOT PERFS/OH	15293	4688.21	-16.66	10836.12
	15346	4741.11	-19.66	10835.48

NEXT TO LAST	15346	4741.11	-19.66	10835.48
LAST READING	15407	4801.99	-23.47	10836.22
TD	15407	4801.99	-23.47	10836.22

Surface Location	150	FS	380	FW
Projected BHL	4952	FS	357	FW
Location of				
Top Perfs/OH	899	FS	387	FW
Bottom Perfs/OH	4838	FS	363	FW

SUMMARY of Subsurface Locations

Surface Location	M-16-21S-34E	150	FS	380	FW	Vert. Depth
Top Perfs/OH	M-16-21S-34E	899	FS	387	FW	10878.41
Bottom Perfs/OH	D-16-21S-34E	4838	FS	363	FW	10836.12
Projected TD	D-16-21S-34E	4952	FS	357	FW	10836.22

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5D Survey Report**GMT Exploration Co., LLC****Field Name:** *GMT Exploration Lea Co., New Mexico (NAD 83 NME)***Site Name:** *Jamalberry #1H***Well Name:** *Jamalberry #1H***Survey:** *Wft MWD Svy*

21 April 2014



Jamalberry #1H

Field Name	Map Units : US ft		Company Name : GMT Exploration Co., LLC	
GMT Exploration Lea Co., New Mexico (NAD'83 NME)	Vertical Reference Datum (VRD) : Mean Sea Level			
	Projected Coordinate System : NAD83 / New Mexico East (ftUS)			
	Comment :			
Site Name Jamalberry #1H	Units : US ft	North Reference : Grid	Convergence Angle : 0.46	
	Position	Northing : 536504.34 US ft	Latitude : 32° 28' 19.33"	
	Easting : 803818.79 US ft	Longitude : -103° 28' 55.96"		
Elevation above Mean Sea Level: 3724.00 US ft				
Comment :				
Slot Name Jamalberry #1H	Position (Offsets relative to Site Centre)			
	+N / -S : 0.00 US ft	Northing : 536504.34 US ft	Latitude : 32° 28' 19.33"	
	+E / -W : 0.00 US ft	Easting : 803818.79 US ft	Longitude : -103° 28' 55.96"	
	Slot TVD Reference : Ground Elevation			
Elevation above Mean Sea Level : 3724.00 US ft				
Comment :				
Well Name Jamalberry #1H	Type : Main well		UWI :	
	Rig Height Drill Floor : 19.00 US ft		Comment :	
	Relative to Mean Sea Level: 3743.00 US ft			
	Closure Distance : 4802.05 US ft		Closure Azimuth : 359.72°	
	Vertical Section (Position of Origin Relative to Slot)			
+N / -S : 0.00 US ft +E / -W : 0.00 US ft Az : 359.51°				

Target Set

Name : Jamalberry #1H **Number of Targets :** 1

Target

Comment :

Target Name:	Position (Relative to Slot centre)		
PBHL	+N / -S : 4802.56 US ft	Northing : 541306.89 US ft	Latitude : 32° 29' 6.85"
	+E / -W : -41.36 US ft	Easting : 803777.43 US ft	Longitude : -103° 28' 55.99"
Shape:	TVD (Drill Floor) : 10823.00 US ft		
Cuboid	Orientation	Azimuth : 0.00°	Inclination : 0.00°
	Dimensions	Length : 0.00 US ft	Breadth : 0.00 US ft
		Height : 0.00 US ft	

Survey Name : Wft MWD Svy

Date : 27/Mar/2014	Survey Tool : MWD	Comment :	Company :
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Magnetic Model			
Model Name: BGGM	Date: 05/Mar/2014	Field Strength: 48511.7 nT	Declination: 7.34° Dip: 60.35°

Tie Point
MD: 1750 **Inclination:** 0.06 **Azimuth:** 231.25 **TVD:** 1749.96 **North Offset:** -4.87 **East Offset:** -7.99

5D Survey Report

Well path created using minimum curvature

Survey Points (Relative to Slot centre, TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	VS (US ft)	DLS (%/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
1750.00	0.06	231.25	1749.96	-4.87	-7.99	-4.80	0.00	536499.47	803810.80	Tie On Gyrodata
1861.00	0.16	214.15	1860.96	-5.03	-8.12	-4.96	0.09	536499.30	803810.67	First Wft Svy
1957.00	0.16	163.93	1956.95	-5.27	-8.16	-5.20	0.14	536499.06	803810.63	
2053.00	0.25	138.63	2052.95	-5.56	-7.98	-5.49	0.13	536498.78	803810.81	
2149.00	0.36	105.07	2148.95	-5.80	-7.56	-5.73	0.21	536498.54	803811.24	
2245.00	0.35	112.80	2244.95	-5.99	-6.99	-5.93	0.05	536498.35	803811.80	
2341.00	0.47	105.67	2340.95	-6.21	-6.34	-6.15	0.14	536498.13	803812.45	
2437.00	0.49	89.43	2436.95	-6.31	-5.55	-6.26	0.14	536498.03	803813.24	
2533.00	0.43	96.10	2532.94	-6.34	-4.79	-6.30	0.08	536497.99	803814.00	
2629.00	0.60	75.87	2628.94	-6.26	-3.94	-6.23	0.26	536498.08	803814.85	
2725.00	0.70	73.28	2724.93	-5.97	-2.89	-5.94	0.11	536498.37	803815.90	
2821.00	0.66	53.92	2820.93	-5.47	-1.88	-5.46	0.24	536498.86	803816.91	
2917.00	0.70	68.64	2916.92	-4.94	-0.89	-4.93	0.19	536499.40	803817.90	
3013.00	0.59	62.56	3012.91	-4.49	0.09	-4.49	0.13	536499.84	803818.89	
3109.00	0.88	67.87	3108.90	-3.99	1.22	-4.00	0.31	536500.35	803820.01	
3205.00	1.11	80.81	3204.89	-3.56	2.82	-3.59	0.33	536500.78	803821.61	
3301.00	1.22	78.41	3300.87	-3.21	4.74	-3.25	0.13	536501.13	803823.53	
3397.00	1.30	72.09	3396.85	-2.67	6.77	-2.73	0.17	536501.67	803825.56	
3493.00	1.33	76.61	3492.82	-2.08	8.89	-2.15	0.11	536502.26	803827.68	
3589.00	1.28	79.13	3588.80	-1.61	11.03	-1.71	0.08	536502.72	803829.82	
3685.00	1.15	87.04	3684.78	-1.36	13.05	-1.47	0.22	536502.97	803831.84	
3781.00	0.87	84.18	3780.76	-1.24	14.73	-1.37	0.30	536503.10	803833.52	
3877.00	0.76	88.27	3876.75	-1.15	16.09	-1.28	0.13	536503.19	803834.89	
3973.00	0.76	85.75	3972.74	-1.08	17.37	-1.23	0.03	536503.26	803836.16	
4069.00	0.87	92.08	4068.73	-1.06	18.73	-1.22	0.15	536503.28	803837.52	
4165.00	0.76	106.31	4164.72	-1.26	20.07	-1.44	0.24	536503.07	803838.86	
4261.00	0.85	94.59	4260.71	-1.50	21.39	-1.68	0.19	536502.84	803840.18	
4357.00	0.74	91.12	4356.70	-1.57	22.72	-1.76	0.13	536502.77	803841.51	
4453.00	0.84	83.03	4452.70	-1.50	24.04	-1.70	0.16	536502.84	803842.83	
4549.00	1.04	76.59	4548.68	-1.21	25.58	-1.43	0.24	536503.13	803844.37	
4645.00	0.84	63.97	4644.67	-0.70	27.06	-0.93	0.30	536503.64	803845.85	
4741.00	0.70	56.68	4740.66	-0.07	28.18	-0.31	0.18	536504.27	803846.98	
4837.00	0.63	55.16	4836.65	0.56	29.11	0.31	0.08	536504.89	803847.90	
4933.00	0.66	47.68	4932.65	1.23	29.95	0.97	0.09	536505.57	803848.74	
5029.00	0.50	43.16	5028.64	1.91	30.65	1.65	0.17	536506.25	803849.44	
5125.00	0.63	38.24	5124.64	2.63	31.26	2.36	0.14	536506.97	803850.05	
5221.00	0.60	47.82	5220.63	3.38	31.96	3.11	0.11	536507.72	803850.75	
5317.00	0.59	48.23	5316.63	4.05	32.70	3.77	0.01	536508.38	803851.49	
5413.00	0.53	47.00	5412.62	4.68	33.39	4.39	0.06	536509.02	803852.18	
5509.00	0.59	32.14	5508.62	5.40	33.98	5.11	0.16	536509.74	803852.77	
5650.00	0.66	36.79	5649.61	6.67	34.85	6.37	0.06	536511.00	803853.64	
5803.00	0.64	44.84	5802.60	7.98	35.98	7.67	0.06	536512.31	803854.77	
5899.00	0.60	46.70	5898.60	8.70	36.73	8.39	0.05	536513.04	803855.52	
5995.00	0.60	34.72	5994.59	9.46	37.38	9.14	0.13	536513.80	803856.17	
6091.00	0.56	30.95	6090.59	10.28	37.91	9.95	0.06	536514.61	803856.70	
6187.00	0.45	19.37	6186.58	11.03	38.27	10.71	0.16	536515.37	803857.06	
6283.00	0.49	24.66	6282.58	11.76	38.57	11.43	0.06	536516.10	803857.36	
6379.00	0.59	28.66	6378.57	12.57	38.98	12.24	0.11	536516.91	803857.77	
6476.00	0.56	21.29	6475.57	13.45	39.39	13.11	0.08	536517.79	803858.18	
6572.00	0.44	21.34	6571.57	14.23	39.69	13.89	0.13	536518.57	803858.48	
6667.00	0.35	9.18	6666.56	14.86	39.87	14.51	0.13	536519.19	803858.66	
6764.00	0.36	9.11	6763.56	15.45	39.97	15.11	0.01	536519.79	803858.76	
6860.00	0.47	10.39	6859.56	16.13	40.09	15.79	0.11	536520.47	803858.88	
6956.00	0.38	357.91	6955.56	16.84	40.15	16.50	0.13	536521.18	803858.94	
7051.00	0.43	339.04	7050.55	17.49	40.01	17.14	0.15	536521.82	803858.80	
7146.00	0.38	318.38	7145.55	18.06	39.67	17.72	0.16	536522.39	803858.46	

5D Survey Report

Survey Points (Relative to Slot centre, TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	VS (US ft)	DLS (%/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
7240.00	0.41	326.85	7239.55	18.57	39.28	18.23	0.07	536522.91	803858.07	
7335.00	0.45	323.14	7334.55	19.15	38.87	18.82	0.05	536523.49	803857.66	
7430.00	0.41	310.66	7429.54	19.67	38.39	19.34	0.11	536524.01	803857.18	
7525.00	0.35	310.41	7524.54	20.08	37.91	19.76	0.06	536524.42	803856.70	
7620.00	0.43	318.21	7619.54	20.54	37.45	20.22	0.10	536524.87	803856.24	
7715.00	0.56	328.09	7714.54	21.20	36.97	20.88	0.16	536525.53	803855.76	
7810.00	0.70	305.62	7809.53	21.93	36.25	21.62	0.30	536526.27	803855.04	
7905.00	0.79	300.91	7904.52	22.60	35.22	22.30	0.11	536526.94	803854.01	
8000.00	0.85	279.93	7999.51	23.06	33.96	22.77	0.32	536527.40	803852.75	
8094.00	0.94	278.78	8093.50	23.30	32.51	23.02	0.10	536527.64	803851.30	
8189.00	0.85	271.82	8188.49	23.44	31.04	23.17	0.15	536527.78	803849.83	
8284.00	0.84	287.07	8283.48	23.67	29.67	23.41	0.24	536528.00	803848.46	
8379.00	0.64	287.58	8378.47	24.03	28.50	23.79	0.21	536528.37	803847.29	
8474.00	0.56	288.16	8473.47	24.34	27.55	24.10	0.08	536528.67	803846.34	
8569.00	0.49	268.80	8568.46	24.47	26.70	24.24	0.20	536528.81	803845.49	
8663.00	0.45	272.14	8662.46	24.48	25.93	24.26	0.05	536528.82	803844.72	
8758.00	0.35	351.93	8757.46	24.78	25.52	24.56	0.55	536529.12	803844.31	
8853.00	0.49	53.38	8852.46	25.31	25.80	25.09	0.47	536529.65	803844.59	
8944.00	0.28	92.66	8943.45	25.53	26.34	25.30	0.36	536529.87	803845.13	
9039.00	0.44	100.97	9038.45	25.45	26.93	25.22	0.18	536529.79	803845.72	
9134.00	0.51	106.96	9133.45	25.26	27.69	25.02	0.09	536529.60	803846.48	
9229.00	0.70	134.84	9228.44	24.73	28.51	24.48	0.36	536529.06	803847.30	
9324.00	0.82	188.10	9323.44	23.64	28.82	23.40	0.73	536527.98	803847.61	
9419.00	0.70	234.79	9418.43	22.64	28.25	22.39	0.64	536526.97	803847.04	
9514.00	1.22	251.06	9513.41	21.97	26.82	21.74	0.61	536526.31	803845.61	
9609.00	1.31	280.40	9608.39	21.84	24.80	21.63	0.68	536526.18	803843.59	
9704.00	1.43	295.37	9703.37	22.54	22.66	22.35	0.40	536526.88	803841.45	
9799.00	1.31	292.55	9798.34	23.47	20.58	23.29	0.14	536527.81	803839.37	
9894.00	0.93	290.23	9893.32	24.15	18.86	23.99	0.40	536528.49	803837.65	
9988.00	1.15	288.79	9987.30	24.72	17.25	24.57	0.24	536529.06	803836.04	
10083.00	1.29	289.75	10082.28	25.39	15.34	25.26	0.15	536529.72	803834.13	
10178.00	1.42	289.77	10177.26	26.15	13.23	26.03	0.14	536530.48	803832.02	
10234.00	1.38	289.90	10233.24	26.61	11.94	26.51	0.07	536530.95	803830.73	
10285.00	1.26	284.23	10284.23	26.96	10.82	26.87	0.35	536531.30	803829.61	
10348.00	4.83	341.81	10347.14	29.65	9.32	29.57	6.81	536533.99	803828.11	
10380.00	7.54	352.12	10378.95	33.01	8.61	32.94	9.12	536537.35	803827.40	
10411.00	10.53	358.39	10409.56	37.86	8.25	37.79	10.14	536542.19	803827.04	
10443.00	13.80	0.52	10440.84	44.60	8.20	44.53	10.31	536548.94	803826.99	
10474.00	16.96	0.37	10470.72	52.82	8.27	52.75	10.19	536557.16	803827.06	
10506.00	20.30	1.18	10501.04	63.04	8.41	62.96	10.47	536567.38	803827.20	
10538.00	23.56	1.71	10530.72	74.98	8.71	74.91	10.21	536579.32	803827.51	
10569.00	26.90	1.90	10558.76	88.19	9.13	88.11	10.78	536592.53	803827.92	
10601.00	30.32	1.12	10586.85	103.51	9.53	103.42	10.75	536607.84	803828.32	
10632.00	33.28	0.19	10613.19	119.84	9.71	119.75	9.68	536624.17	803828.50	
10664.00	35.54	359.77	10639.59	137.92	9.70	137.83	7.10	536642.26	803828.49	
10696.00	37.94	358.81	10665.24	157.06	9.46	156.97	7.71	536661.40	803828.25	
10728.00	40.99	358.74	10689.94	177.39	9.03	177.31	9.53	536681.73	803827.82	
10759.00	45.31	0.16	10712.55	198.58	8.83	198.50	14.28	536702.92	803827.62	
10791.00	50.13	0.73	10734.07	222.25	9.02	222.17	15.12	536726.59	803827.81	
10823.00	54.64	0.11	10753.60	247.59	9.20	247.51	14.18	536751.93	803827.99	
10854.00	57.01	359.00	10771.01	273.24	9.00	273.15	8.20	536777.57	803827.79	
10886.00	59.74	357.96	10787.79	300.47	8.27	300.39	8.97	536804.81	803827.07	
10918.00	62.99	357.85	10803.12	328.54	7.25	328.46	10.16	536832.87	803826.04	
10949.00	65.56	356.84	10816.58	356.43	5.95	356.37	8.79	536860.77	803824.74	
10981.00	67.91	357.45	10829.21	385.79	4.49	385.74	7.55	536890.13	803823.28	
11013.00	70.01	358.87	10840.70	415.64	3.53	415.59	7.76	536919.98	803822.32	
11044.00	71.28	0.49	10850.98	444.88	3.37	444.84	6.41	536949.22	803822.16	
11076.00	73.39	1.51	10860.69	475.37	3.90	475.32	7.26	536979.71	803822.70	
11108.00	76.23	2.00	10869.07	506.23	4.85	506.17	9.00	537010.57	803823.64	

5D Survey Report

Survey Points (Relative to Slot centre, TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	VS (US ft)	DLS (%/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
11140.00	80.37	1.89	10875.56	537.54	5.91	537.47	12.94	537041.88	803824.70	
11171.00	84.95	1.96	10879.52	568.26	6.95	568.18	14.78	537072.60	803825.74	
11203.00	89.02	0.73	10881.20	600.20	7.70	600.12	13.29	537104.54	803826.49	
11235.00	90.35	0.15	10881.38	632.20	7.94	632.11	4.53	537136.54	803826.73	
11255.00	90.77	359.79	10881.18	652.20	7.93	652.11	2.77	537156.54	803826.72	
11350.00	92.45	359.47	10878.51	747.16	7.32	747.07	1.80	537251.49	803826.11	
11445.00	93.08	359.39	10873.93	842.04	6.37	841.96	0.67	537346.38	803825.16	
11540.00	90.56	358.86	10870.91	936.97	4.92	936.90	2.71	537441.31	803823.71	
11634.00	91.82	357.89	10868.96	1030.91	2.26	1030.86	1.69	537535.25	803821.05	
11729.00	91.33	358.49	10866.35	1125.83	-0.74	1125.79	0.82	537630.17	803818.05	
11824.00	88.81	359.07	10866.23	1220.80	-2.76	1220.78	2.72	537725.14	803816.03	
11919.00	89.16	358.53	10867.92	1315.76	-4.75	1315.76	0.68	537820.10	803814.04	
12014.00	90.98	359.05	10867.80	1410.74	-6.76	1410.74	1.99	537915.07	803812.03	
12109.00	89.44	358.60	10867.45	1505.71	-8.71	1505.73	1.69	538010.05	803810.08	
12202.00	89.65	358.38	10868.19	1598.68	-11.16	1598.72	0.33	538103.02	803807.63	
12297.00	89.30	357.98	10869.06	1693.63	-14.17	1693.69	0.56	538197.96	803804.62	
12392.00	88.88	358.65	10870.57	1788.57	-16.97	1788.65	0.83	538292.91	803801.82	
12486.00	89.65	359.48	10871.78	1882.55	-18.50	1882.64	1.20	538386.89	803800.29	
12581.00	90.07	358.50	10872.01	1977.53	-20.18	1977.63	1.12	538481.87	803798.62	
12676.00	90.70	359.51	10871.37	2072.52	-21.82	2072.63	1.25	538576.85	803796.97	
12771.00	90.91	358.80	10870.03	2167.50	-23.23	2167.61	0.78	538671.83	803795.57	
12865.00	90.91	0.24	10868.54	2261.48	-24.01	2261.60	1.53	538765.81	803794.78	
12960.00	91.19	359.87	10866.80	2356.46	-23.92	2356.58	0.49	538860.80	803794.87	
13055.00	90.98	359.87	10865.00	2451.44	-24.14	2451.56	0.22	538955.78	803794.65	
13149.00	90.84	359.24	10863.51	2545.43	-24.87	2545.55	0.69	539049.77	803793.92	
13245.00	90.91	358.84	10862.04	2641.40	-26.48	2641.53	0.42	539145.74	803792.32	
13338.00	90.91	358.15	10860.57	2734.36	-28.92	2734.51	0.74	539238.70	803789.87	
13433.00	90.77	359.19	10859.17	2829.32	-31.12	2829.49	1.10	539333.66	803787.67	
13526.00	90.70	358.73	10857.98	2922.30	-32.81	2922.47	0.50	539426.64	803785.98	
13621.00	90.14	359.72	10857.28	3017.29	-34.10	3017.47	1.20	539521.62	803784.70	
13716.00	89.65	0.27	10857.46	3112.29	-34.10	3112.46	0.78	539616.62	803784.69	
13809.00	89.93	1.68	10857.80	3205.27	-32.52	3205.43	1.55	539709.61	803786.27	
13903.00	90.49	1.65	10857.45	3299.23	-29.79	3299.36	0.60	539803.57	803789.00	
13998.00	91.54	2.25	10855.77	3394.16	-26.56	3394.26	1.27	539898.49	803792.23	
14093.00	91.40	2.17	10853.33	3489.05	-22.90	3489.12	0.17	539993.39	803795.90	
14188.00	91.54	2.41	10850.90	3583.95	-19.10	3583.98	0.29	540088.28	803799.69	
14283.00	90.77	0.94	10848.98	3678.88	-16.32	3678.89	1.75	540183.22	803802.47	
14377.00	89.65	0.81	10848.64	3772.87	-14.89	3772.86	1.20	540277.21	803803.90	
14471.00	88.46	1.09	10850.19	3866.84	-13.33	3866.82	1.30	540371.18	803805.46	
14566.00	89.02	2.21	10852.28	3961.78	-10.60	3961.73	1.32	540466.12	803808.19	
14660.00	90.35	1.74	10852.79	4055.72	-7.36	4055.63	1.50	540560.06	803811.43	
14754.00	91.75	0.91	10851.07	4149.68	-5.18	4149.57	1.73	540654.01	803813.61	
14849.00	91.68	0.16	10848.23	4244.63	-4.30	4244.51	0.79	540748.97	803814.49	
14943.00	92.10	359.05	10845.13	4338.57	-4.94	4338.46	1.26	540842.91	803813.85	
15037.00	91.40	358.89	10842.26	4432.51	-6.63	4432.41	0.76	540936.85	803812.16	
15131.00	91.47	358.23	10839.90	4526.45	-9.00	4526.37	0.71	541030.79	803809.80	
15226.00	92.10	357.09	10836.94	4621.33	-12.87	4621.27	1.37	541125.66	803805.92	
15346.00	89.30	356.42	10835.48	4741.11	-19.66	4741.11	2.40	541245.45	803799.13	Last Wft Svy
15407.00	89.30	356.42	10836.22	4801.99	-23.47	4802.01	0.00	541306.33	803795.32	Projection to Bit