

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1263 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

☒ AMENDED REPORT

AS DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35911		*Pool Code 47540	*Pool Name NAGEEZI GALLUP
*Property Code 322997	*Property Name STATE 2408-32A COM		*Well Number 1H
*GRID No. 289408	*Operator Name LOGOS OPERATING, LLC		*Elevation 7002'

CONFIDENTIAL

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	32	24N	8W		1179	NORTH	346	EAST	SAN JUAN

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	32	24N	8W		309	NORTH	31	WEST	SAN JUAN

*Dedicated Acres 320.0 Acres N/2 - Section 32	*Joint or Infill INFILL	*Consolidation Code	*Order No.
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END-OF-LATERAL (A)
309' FNL 31' FWL
SECTION 32, T24N, R8W
LAT: 36.277237°N
LONG: 107.713392°W
DATUM: NAD1927

LAT: 36.277250°N
LONG: 107.714005°W
DATUM: NAD1983

FIRST PERFORATION (B)
307' FNL 101' FWL
SECTION 32, T24N, R8W
LAT: 36.277243°N
LONG: 107.713155°W
DATUM: NAD1927

LAT: 36.277255°N
LONG: 107.713767°W
DATUM: NAD1983

LAST PERFORATION (C)
293' FNL 100' FWL
SECTION 32, T24N, R8W
LAT: 36.277270°N
LONG: 107.695917°W
DATUM: NAD1927

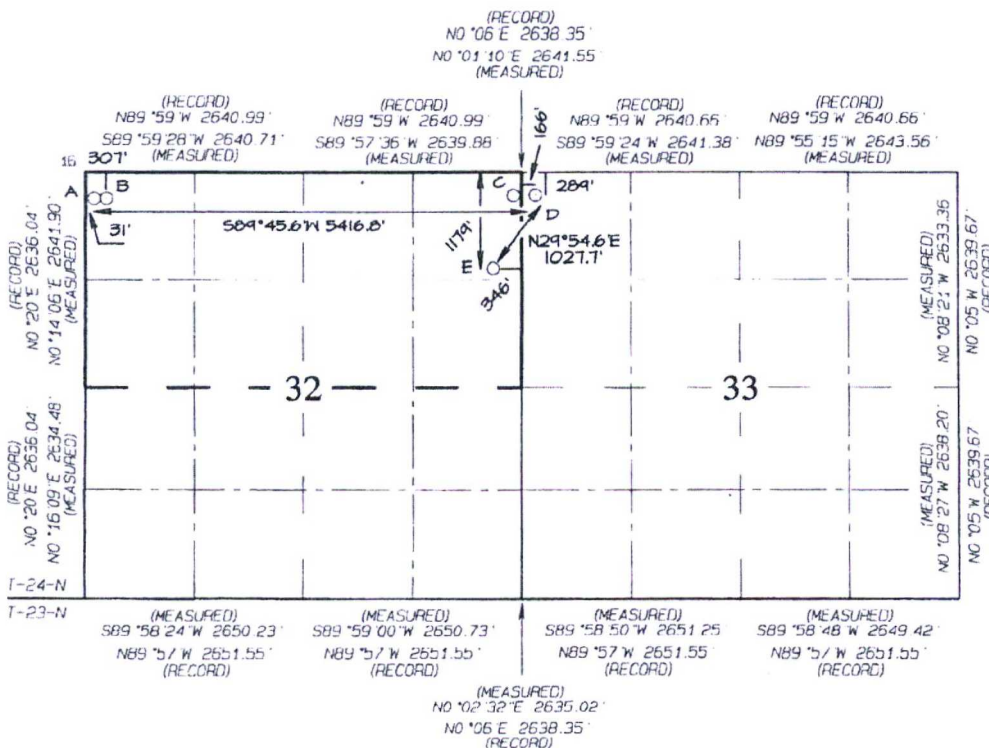
LAT: 36.277282°N
LONG: 107.696529°W
DATUM: NAD1983

POINT-OF-ENTRY (D)
289' FNL 166' FWL
SECTION 33, T24N, R8W
LAT: 36.277280°N
LONG: 107.695016°W
DATUM: NAD1927

LAT: 36.277292°N
LONG: 107.695627°W
DATUM: NAD1983

SURFACE LOCATION (E)
1179' FNL 346' FWL
SECTION 32, T24N, R8W
LAT: 36.274835°N
LONG: 107.696758°W
DATUM: NAD1927

LAT: 36.274847°N
LONG: 107.697370°W
DATUM: NAD1983



17 OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the Division.

Signature: Tamra Sessions Date: 7-5-19
Printed Name: Tsessions@logosresourcesllc.com
E-mail Address:

18 SURVEYOR CERTIFICATION
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Revised: JULY 2, 2019
Date of Survey: MARCH 8, 2019
Signature and Seal of Professional Surveyor: JASON C. EDWARDS

15269

JASON C. EDWARDS
NEW MEXICO
REGISTERED PROFESSIONAL SURVEYOR
15269

JASON C. EDWARDS
Certificate Number 15269

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION
UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A
NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

AMCO

Ar

JUL 19 2019

DISTRICT III

W



Logos Operating LLC

San Juan, NM NAD83

State 2408-32A

State 2408-32A 1H

OH

Design: OH

Survey Report - Geographic

18 June, 2019



www.scientificdrilling.com



Scientific Drilling, Intl
Survey Report - Geographic



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well State 2408-32A 1H
Project:	San Juan, NM NAD83	TVD Reference:	GL 7002' & RKB 25' @ 7027.00usft (Aztec 1000)
Site:	State 2408-32A	MD Reference:	GL 7002' & RKB 25' @ 7027.00usft (Aztec 1000)
Well:	State 2408-32A 1H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Project	San Juan, NM NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site		State 2408-32A			
Site Position:		Northing:	1,919,371.54 usft	Latitude:	36.2748470
From:	Lat/Long	Easting:	2,763,167.91 usft	Longitude:	-107.6973700
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.08 °

Well	State 2408-32A 1H					
Well Position	+N-S	0.00 usft	Northing:	1,919,371.54 usft	Latitude:	36.2748470
	+E-W	0.00 usft	Easting:	2,763,167.91 usft	Longitude:	-107.6973700
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	7,002.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/1/2019	8.78	62.83	49,480

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	279.860	

Survey Program		Date	6/18/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
436.00	5,526.00	Survey #1 - Surface MWD Survey (OH)	MWD+HDGM	OWSG MWD + HDGM	
5,620.00	6,093.00	Survey #2 - Curve MWD Survey (OH)	MWD+HDGM	OWSG MWD + HDGM	
6,242.00	11,570.00	Survey #3 - Lateral MWD Survey (OH)	MWD+HDGM	OWSG MWD + HDGM	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.000	0.00	0.00	0.00	1,919,371.54	2,763,167.91	36.2748470	-107.6973700
436.00	0.62	108.890	435.99	-0.76	2.23	1,919,370.78	2,763,170.14	36.2748449	-107.6973625
First SDI Surface MWD Survey									
529.00	0.32	200.300	528.99	-1.17	2.62	1,919,370.38	2,763,170.53	36.2748438	-107.6973612
623.00	0.50	167.320	622.99	-1.82	2.62	1,919,369.73	2,763,170.53	36.2748420	-107.6973612
716.00	1.66	95.990	715.97	-2.35	4.05	1,919,369.20	2,763,171.96	36.2748405	-107.6973563
810.00	1.89	89.850	809.93	-2.49	6.95	1,919,369.06	2,763,174.86	36.2748401	-107.6973465
903.00	1.67	53.110	902.88	-1.67	9.57	1,919,369.88	2,763,177.48	36.2748424	-107.6973376
996.00	1.91	55.570	995.84	0.02	11.93	1,919,371.58	2,763,179.84	36.2748470	-107.6973296
1,090.00	1.65	353.010	1,089.80	2.25	13.06	1,919,373.81	2,763,180.96	36.2748531	-107.6973257



Scientific Drilling, Intl
Survey Report - Geographic



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well State 2408-32A 1H
Project:	San Juan, NM NAD83	TVD Reference:	GL 7002' & RKB 25' @ 7027.00usft (Aztec 1000)
Site:	State 2408-32A	MD Reference:	GL 7002' & RKB 25' @ 7027.00usft (Aztec 1000)
Well:	State 2408-32A 1H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,183.00	1.95	353.830	1,182.76	5.15	12.72	1,919,376.71	2,763,180.82	36.2748611	-107.6973269
1,276.00	1.99	18.600	1,275.70	8.25	13.07	1,919,379.81	2,763,180.97	36.2748696	-107.6973257
1,370.00	1.82	55.690	1,369.65	10.64	14.82	1,919,382.20	2,763,182.72	36.2748762	-107.6973198
1,463.00	3.22	70.120	1,462.56	12.36	18.50	1,919,383.93	2,763,186.39	36.2748809	-107.6973073
1,557.00	4.51	67.480	1,556.35	14.67	24.40	1,919,386.25	2,763,192.28	36.2748873	-107.6972873
1,650.00	6.09	61.990	1,648.95	18.39	32.13	1,919,389.98	2,763,200.01	36.2748975	-107.6972610
1,743.00	8.07	64.960	1,741.23	23.47	42.40	1,919,395.08	2,763,210.28	36.2749115	-107.6972262
1,837.00	10.29	65.910	1,834.02	28.69	56.04	1,919,401.31	2,763,223.91	36.2749285	-107.6971799
1,930.00	12.69	64.860	1,925.15	37.42	72.88	1,919,409.07	2,763,240.73	36.2749498	-107.6971228
2,023.00	13.83	59.080	2,015.68	47.47	91.66	1,919,419.15	2,763,259.50	36.2749774	-107.6970591
2,118.00	14.51	55.190	2,107.79	60.10	111.17	1,919,431.80	2,763,279.00	36.2750121	-107.6969929
2,213.00	18.20	60.720	2,198.93	74.16	133.90	1,919,445.89	2,763,301.70	36.2750507	-107.6969158
2,307.00	19.74	60.550	2,287.83	89.14	160.52	1,919,460.91	2,763,328.31	36.2750919	-107.6968254
2,402.00	21.61	62.400	2,376.70	105.14	190.00	1,919,476.95	2,763,357.76	36.2751358	-107.6967254
2,497.00	22.49	65.910	2,464.76	120.66	222.09	1,919,492.52	2,763,389.83	36.2751784	-107.6966166
2,592.00	24.13	64.080	2,552.00	136.57	256.15	1,919,508.47	2,763,423.86	36.2752221	-107.6965010
2,687.00	24.00	59.020	2,638.75	155.00	290.18	1,919,526.95	2,763,457.87	36.2752728	-107.6963856
2,781.00	23.19	57.810	2,724.90	174.70	322.23	1,919,546.70	2,763,489.90	36.2753269	-107.6962768
2,876.00	23.95	60.600	2,811.97	194.13	354.86	1,919,566.17	2,763,522.50	36.2753803	-107.6961661
2,971.00	25.92	61.270	2,898.11	213.58	389.87	1,919,585.67	2,763,557.48	36.2754337	-107.6960473
3,065.00	23.56	59.940	2,983.48	232.87	424.15	1,919,605.01	2,763,591.73	36.2754867	-107.6959310
3,160.00	23.12	62.560	3,070.71	250.97	457.14	1,919,623.16	2,763,624.69	36.2755364	-107.6958191
3,255.00	23.85	63.170	3,157.84	268.24	490.83	1,919,640.47	2,763,658.36	36.2755838	-107.6957048
3,350.00	23.74	60.620	3,244.77	286.29	524.63	1,919,658.57	2,763,692.14	36.2756334	-107.6955901
3,458.00	25.43	61.860	3,342.97	307.89	564.03	1,919,680.23	2,763,731.50	36.2756928	-107.6954565
3,553.00	25.22	61.730	3,428.84	327.10	599.84	1,919,699.48	2,763,767.29	36.2757455	-107.6953350
3,648.00	24.16	61.370	3,515.16	346.00	634.73	1,919,718.44	2,763,802.15	36.2757974	-107.6952166
3,743.00	23.86	63.480	3,601.94	363.89	668.99	1,919,736.38	2,763,836.38	36.2758466	-107.6951004
3,837.00	23.92	61.430	3,687.89	381.50	702.74	1,919,754.03	2,763,870.11	36.2758949	-107.6949859
3,932.00	25.23	59.130	3,774.28	401.10	737.03	1,919,773.68	2,763,904.37	36.2759488	-107.6948695
4,026.00	26.49	58.740	3,858.87	422.26	772.15	1,919,794.88	2,763,939.46	36.2760069	-107.6947504
4,121.00	24.30	57.440	3,944.68	443.77	806.74	1,919,816.45	2,763,974.02	36.2760660	-107.6946330
4,215.00	24.11	56.600	4,030.42	464.75	839.07	1,919,837.47	2,764,006.32	36.2761236	-107.6945234
4,309.00	22.88	58.760	4,116.62	484.80	870.72	1,919,857.56	2,764,037.95	36.2761787	-107.6944160
4,404.00	23.86	57.230	4,203.83	504.78	902.67	1,919,877.59	2,764,069.87	36.2762336	-107.6943076
4,498.00	25.02	57.350	4,289.41	525.79	935.39	1,919,898.65	2,764,102.56	36.2762913	-107.6941966
4,593.00	25.64	57.390	4,375.27	547.71	969.62	1,919,920.61	2,764,136.76	36.2763515	-107.6940804
4,673.00	23.65	56.840	4,447.98	565.81	997.64	1,919,938.76	2,764,164.75	36.2764013	-107.6939854
4,768.00	20.71	55.050	4,535.94	585.86	1,027.36	1,919,958.85	2,764,194.45	36.2764563	-107.6938845
4,862.00	20.43	53.490	4,623.95	605.15	1,054.17	1,919,978.17	2,764,221.23	36.2765093	-107.6937936
4,957.00	18.68	36.390	4,713.54	627.28	1,076.55	1,920,000.33	2,764,243.57	36.2765701	-107.6937177
5,052.00	15.09	8.590	4,804.58	651.80	1,087.44	1,920,024.87	2,764,254.43	36.2766375	-107.6936807
5,147.00	16.59	339.210	4,896.11	676.75	1,084.47	1,920,049.81	2,764,251.43	36.2767060	-107.6936908
5,241.00	19.12	321.760	4,985.64	701.41	1,070.17	1,920,074.45	2,764,237.09	36.2767737	-107.6937393
5,336.00	23.07	305.240	5,074.34	724.40	1,045.30	1,920,097.41	2,764,212.19	36.2768369	-107.6938237
5,431.00	26.52	296.210	5,160.60	744.52	1,011.05	1,920,117.48	2,764,177.91	36.2768922	-107.6939399
5,526.00	25.25	294.070	5,246.07	762.15	973.52	1,920,135.06	2,764,140.35	36.2769406	-107.6940672
Last SDI Surface MWD Survey									
5,620.00	30.82	290.310	5,329.01	778.70	932.59	1,920,151.55	2,764,099.41	36.2769861	-107.6942060
First SDI Curve MWD Survey									
5,715.00	38.74	288.930	5,406.98	796.82	881.57	1,920,169.60	2,764,048.36	36.2770358	-107.6943791
5,778.00	45.09	289.540	5,453.84	810.69	841.86	1,920,183.41	2,764,008.63	36.2770740	-107.6945139
5,809.00	48.29	290.840	5,475.10	818.48	820.69	1,920,191.17	2,763,987.45	36.2770954	-107.6945857
5,872.00	57.61	289.360	5,513.02	835.70	773.52	1,920,208.33	2,763,940.25	36.2771427	-107.6947457
5,904.00	63.10	288.740	5,528.84	844.77	747.24	1,920,217.36	2,763,913.96	36.2771676	-107.6948349



Scientific Drilling, Intl Survey Report - Geographic



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well State 2408-32A 1H
Project:	San Juan, NM NAD83	TVD Reference:	GL 7002' & RKB 25' @ 7027.00usft (Aztec 1000)
Site:	State 2408-32A	MD Reference:	GL 7002' & RKB 25' @ 7027.00usft (Aztec 1000)
Well:	State 2408-32A 1H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
5,951.00	71.27	287.940	5,547.05	858.38	706.15	1,920,230.92	2,763,872.85	36.2772050	-107.6949743	
5,999.00	77.53	285.530	5,559.95	871.67	661.89	1,920,244.15	2,763,828.58	36.2772415	-107.6951244	
6,046.00	81.87	280.480	5,568.36	882.06	616.86	1,920,254.47	2,763,783.53	36.2772700	-107.6952772	
6,093.00	87.01	275.420	5,572.91	888.52	570.56	1,920,260.86	2,763,737.22	36.2772878	-107.6954343	
Last SDI Curve MWD Survey										
6,242.00	90.20	267.990	5,576.54	892.94	421.79	1,920,265.07	2,763,588.45	36.2772999	-107.6959390	
First Lateral MWD Survey										
6,335.00	90.00	267.480	5,576.38	889.26	328.87	1,920,261.27	2,763,495.53	36.2772898	-107.6962543	
6,416.00	90.81	268.488	5,575.81	886.41	247.92	1,920,258.30	2,763,414.59	36.2772820	-107.6965289	
Last Perf @ 6416' MD - 36.2772820, -107.6965289										
6,429.00	90.94	268.650	5,575.61	886.09	234.93	1,920,257.96	2,763,401.59	36.2772811	-107.6965730	
6,522.00	90.84	268.410	5,574.17	883.70	141.97	1,920,255.45	2,763,308.64	36.2772746	-107.6968884	
6,616.00	90.64	268.160	5,572.95	880.89	48.02	1,920,252.50	2,763,214.69	36.2772668	-107.6972071	
6,709.00	89.93	267.900	5,572.49	877.69	-44.92	1,920,249.17	2,763,121.75	36.2772581	-107.6975225	
6,802.00	89.97	267.980	5,572.57	874.35	-137.86	1,920,245.70	2,763,028.82	36.2772489	-107.6978378	
6,896.00	89.66	267.300	5,572.87	870.48	-231.78	1,920,241.70	2,762,934.90	36.2772382	-107.6981564	
6,989.00	91.88	268.420	5,571.62	867.01	-324.70	1,920,238.09	2,762,841.99	36.2772287	-107.6984717	
7,082.00	91.75	267.540	5,568.68	863.73	-417.60	1,920,234.69	2,762,749.10	36.2772197	-107.6987868	
7,176.00	90.17	265.010	5,567.10	857.62	-511.37	1,920,228.45	2,762,655.33	36.2772029	-107.6991050	
7,269.00	91.28	266.800	5,565.93	850.98	-604.12	1,920,221.68	2,762,562.59	36.2771847	-107.6994197	
7,362.00	91.81	268.670	5,563.42	847.31	-697.01	1,920,217.87	2,762,469.71	36.2771746	-107.6997348	
7,456.00	91.48	267.050	5,560.72	843.80	-790.91	1,920,214.23	2,762,375.82	36.2771649	-107.7000534	
7,549.00	90.71	270.610	5,558.94	841.90	-883.85	1,920,212.21	2,762,282.87	36.2771597	-107.7003687	
7,642.00	89.93	271.450	5,558.42	843.57	-976.84	1,920,213.75	2,762,189.89	36.2771643	-107.7006842	
7,736.00	89.43	270.210	5,558.95	844.94	-1,070.82	1,920,214.98	2,762,095.90	36.2771680	-107.7010030	
7,831.00	89.43	269.110	5,559.89	844.37	-1,165.81	1,920,214.28	2,762,000.91	36.2771665	-107.7013253	
7,925.00	91.11	272.810	5,559.45	845.95	-1,259.78	1,920,215.72	2,761,906.94	36.2771708	-107.7016441	
8,020.00	91.35	272.380	5,557.41	850.25	-1,354.66	1,920,219.89	2,761,812.05	36.2771826	-107.7019660	
8,115.00	91.92	272.210	5,554.70	854.05	-1,449.55	1,920,223.56	2,761,717.16	36.2771930	-107.7022879	
8,210.00	92.05	271.400	5,551.41	857.04	-1,544.44	1,920,226.42	2,761,622.27	36.2772012	-107.7026099	
8,305.00	91.48	269.950	5,548.48	858.16	-1,639.39	1,920,227.40	2,761,527.32	36.2772043	-107.7029320	
8,399.00	90.77	268.790	5,546.64	857.12	-1,733.36	1,920,226.23	2,761,433.35	36.2772014	-107.7032508	
8,494.00	90.10	267.510	5,545.92	854.06	-1,828.31	1,920,223.03	2,761,338.41	36.2771930	-107.7035730	
8,588.00	90.07	269.770	5,545.78	851.83	-1,922.27	1,920,220.67	2,761,244.44	36.2771868	-107.7038918	
8,683.00	89.09	267.280	5,546.47	849.38	-2,017.23	1,920,218.09	2,761,149.49	36.2771801	-107.7042139	
8,778.00	90.61	269.310	5,546.72	846.56	-2,112.18	1,920,215.13	2,761,054.54	36.2771723	-107.7045361	
8,873.00	91.35	271.420	5,545.10	847.16	-2,207.16	1,920,215.61	2,760,959.56	36.2771739	-107.7048583	
8,967.00	91.31	270.520	5,542.92	848.75	-2,301.12	1,920,217.06	2,760,865.60	36.2771783	-107.7051771	
9,062.00	91.24	269.500	5,540.80	848.77	-2,396.09	1,920,216.95	2,760,770.63	36.2771783	-107.7054993	
9,157.00	90.74	268.030	5,539.16	846.72	-2,491.05	1,920,214.77	2,760,675.67	36.2771727	-107.7058215	
9,252.00	90.17	269.730	5,538.41	844.86	-2,586.03	1,920,212.78	2,760,580.70	36.2771675	-107.7061437	
9,346.00	90.94	272.380	5,537.50	846.59	-2,680.00	1,920,214.38	2,760,486.72	36.2771723	-107.7064625	
9,440.00	90.37	270.900	5,536.42	849.28	-2,773.95	1,920,216.93	2,760,392.77	36.2771796	-107.7067813	
9,535.00	90.64	269.930	5,535.58	849.97	-2,868.94	1,920,217.49	2,760,297.77	36.2771815	-107.7071035	
9,629.00	90.20	268.780	5,534.89	848.91	-2,962.93	1,920,216.30	2,760,203.78	36.2771786	-107.7074224	
9,723.00	89.53	268.800	5,535.12	846.93	-3,056.91	1,920,214.18	2,760,109.81	36.2771731	-107.7077413	
9,818.00	90.50	271.510	5,535.09	847.19	-3,151.90	1,920,214.30	2,760,014.82	36.2771738	-107.7080635	
9,913.00	90.24	270.630	5,534.48	848.96	-3,246.88	1,920,215.95	2,759,919.84	36.2771786	-107.7083858	
10,007.00	88.92	270.170	5,535.17	849.62	-3,340.88	1,920,216.47	2,759,825.84	36.2771804	-107.7087047	
10,102.00	90.00	273.430	5,536.06	852.60	-3,435.81	1,920,219.32	2,759,730.90	36.2771886	-107.7090268	
10,197.00	90.57	273.370	5,535.59	858.23	-3,530.64	1,920,224.82	2,759,636.06	36.2772040	-107.7093485	
10,292.00	90.34	272.810	5,534.84	863.36	-3,625.50	1,920,229.81	2,759,541.20	36.2772180	-107.7096703	
10,386.00	90.50	271.920	5,534.15	867.23	-3,719.42	1,920,233.56	2,759,447.28	36.2772287	-107.7099890	
10,481.00	89.70	270.370	5,533.98	869.13	-3,814.39	1,920,235.32	2,759,352.30	36.2772338	-107.7103112	
10,576.00	90.03	270.170	5,534.20	869.58	-3,909.39	1,920,235.63	2,759,257.30	36.2772350	-107.7106335	



Scientific Drilling, Intl
Survey Report - Geographic



Company:	Logos Operating LLC	Local Co-ordinate Reference:	Well State 2408-32A 1H
Project:	San Juan, NM NAD83	TVD Reference:	GL 7002' & RKB 25' @ 7027.00usft (Aztec 1000)
Site:	State 2408-32A	MD Reference:	GL 7002' & RKB 25' @ 7027.00usft (Aztec 1000)
Well:	State 2408-32A 1H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,671.00	90.44	270.310	5,533.81	869.98	-4,004.39	1,920,235.90	2,759,162.30	36.2772361	-107.7109558
10,765.00	90.03	269.490	5,533.43	869.81	-4,098.39	1,920,235.60	2,759,088.30	36.2772356	-107.7112747
10,860.00	90.74	272.960	5,532.79	871.84	-4,193.35	1,920,237.50	2,758,973.34	36.2772411	-107.7115969
10,955.00	89.36	271.740	5,532.71	875.74	-4,288.27	1,920,241.26	2,758,878.42	36.2772518	-107.7119189
11,049.00	91.48	271.810	5,532.02	878.65	-4,382.21	1,920,244.04	2,758,784.47	36.2772598	-107.7122376
11,144.00	89.26	269.840	5,531.41	880.02	-4,477.19	1,920,245.28	2,758,689.49	36.2772635	-107.7125599
11,239.00	91.81	270.320	5,530.52	880.15	-4,572.18	1,920,245.27	2,758,594.50	36.2772638	-107.7128821
11,333.00	90.84	269.460	5,528.34	879.97	-4,666.15	1,920,244.96	2,758,500.53	36.2772633	-107.7132010
11,428.00	90.24	268.930	5,527.45	878.64	-4,761.14	1,920,243.49	2,758,405.54	36.2772596	-107.7135232
11,500.00	89.81	268.478	5,527.42	877.01	-4,833.12	1,920,241.76	2,758,333.56	36.2772550	-107.7137674
First Perf @ 11,500' MD - 36.2772551, -107.7137674									
11,514.00	89.73	268.390	5,527.47	876.62	-4,847.11	1,920,241.36	2,758,319.57	36.2772540	-107.7138149
Last Lateral MWD Survey									
11,570.00	89.73	268.390	5,527.74	875.05	-4,903.09	1,920,239.71	2,758,263.60	36.2772496	-107.7140048
Projection to TD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
436.00	435.99	-0.76	2.23	First SDI Surface MWD Survey
5,526.00	5,246.07	762.15	973.52	Last SDI Surface MWD Survey
5,620.00	5,329.01	778.70	932.59	First SDI Curve MWD Survey
6,093.00	5,572.91	888.52	570.56	Last SDI Curve MWD Survey
6,242.00	5,576.54	892.94	421.79	First Lateral MWD Survey
6,416.00	5,575.81	886.41	247.92	Last Perf @ 6416' MD
6,416.00	5,575.81	886.41	247.92	36.2772820, -107.6965289
11,500.00	5,527.42	877.01	-4,833.12	First Perf @ 11,500' MD
11,500.00	5,527.42	877.01	-4,833.12	36.2772551, -107.7137674
11,514.00	5,527.47	876.62	-4,847.11	Last Lateral MWD Survey
11,570.00	5,527.74	875.05	-4,903.09	Projection to TD

Checked By: _____ Approved By: _____ Date: _____