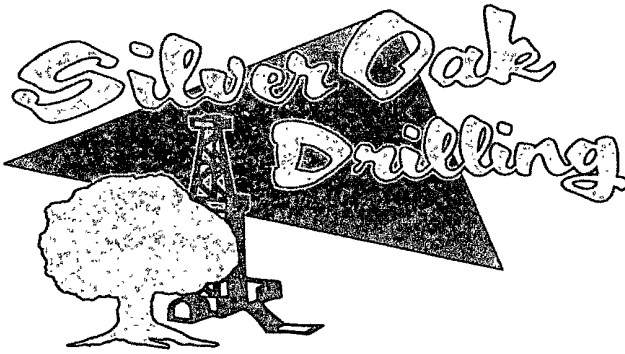




HOBBS OCD

AUG 26 2011 Artesia, NM 88211-1370
(575) 748-1288

RECEIVED

SUR: I-21-15s-31e, 2285/S & 330/E
BHL: L-21-15s-31e, 2235/S & 4958/E
API # 30-005-29186

July 18, 2011

Mack Energy Corporation
PO Box 960
Artesia, NM 88211-0960

RE: Jerry State #1
2285' FSL & 330' FEL
Sec. 21, T15S, R31E
Chaves County, New Mexico

Dear Sir,

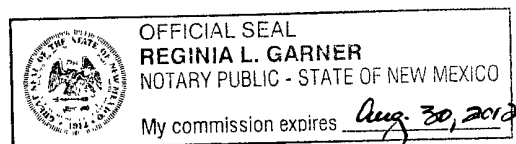
The attached is the Deviation Survey for the above captioned well.

Very truly yours,

Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 15th day of July, 2011.

Notary Public

SEP 22 2011

Pason DataHub Deviation Survey
 # Well Dossier 1306409330 - JERRY STATE #1
 #

# Date	Depth	Deviation	Direction	TVD
5/29/2011	347	0.40	0.00	0.00
5/30/2011	544	0.00	191.80	0.00
5/30/2011	600	0.20	340.80	0.00
5/30/2011	807	0.30	193.00	0.00
5/30/2011	987	0.40	200.00	0.00
5/30/2011	1173	0.40	172.80	0.00
5/31/2011	1408	1.00	155.00	1412.00
6/2/2011	1538	0.80	209.00	0.00
6/3/2011	1692	0.80	178.80	1694.00
6/3/2011	1848	0.20	167.80	1850.00
6/3/2011	1848	0.20	167.80	1850.00
6/3/2011	2004	0.50	62.80	2005.00
6/3/2011	2157	1.90	47.00	0.00
6/3/2011	2313	2.80	63.00	0.00
6/3/2011	2501	2.00	63.00	0.00
6/3/2011	2657	1.60	60.00	0.00
6/4/2011	2813	0.50	41.80	2814.00
6/4/2011	3000	0.90	31.00	0.00
6/4/2011	3180	0.30	94.00	0.00
6/4/2011	3372	0.10	66.00	0.00
6/4/2011	3527	0.10	62.00	0.00
6/5/2011	3684	1.30	52.80	0.00
6/5/2011	3783	0.20	89.80	0.00
6/5/2011	3901	0.30	15.80	0.00
6/5/2011	4025	0.80	293.00	0.00
6/5/2011	4150	1.00	336.00	0.00
6/5/2011	4274	0.60	292.00	0.00
6/6/2011	4399	0.50	317.80	0.00
6/6/2011	4525	0.90	309.00	0.00
6/6/2011	4646	0.90	322.00	0.00
6/6/2011	4767	0.00	271.00	0.00
6/6/2011	4866	0.70	324.00	0.00
6/6/2011	4991	0.40	291.00	0.00
6/7/2011	5084	1.00	286.80	0.00
6/8/2011	5247	0.80	343.80	0.00
6/8/2011	5371	0.70	328.80	0.00
6/8/2011	5496	0.10	335.00	0.00
6/8/2011	5619	0.00	323.00	0.00
6/9/2011	5745	0.60	302.80	5747.00
6/9/2011	5869	0.10	173.80	0.00
6/9/2011	5994	0.60	44.00	0.00
6/9/2011	6118	0.20	150.00	0.00
6/10/2011	6242	0.20	337.80	0.00
6/10/2011	6366	0.10	277.80	0.00
6/10/2011	6491	0.40	89.80	0.00
6/10/2011	6616	0.30	287.00	0.00
6/11/2011	6741	0.40	210.80	0.00
6/11/2011	6867	0.40	306.80	0.00
6/12/2011	7021	0.35	277.05	7020.32

#	Date	Depth	Deviation	Direction	TVD
6/12/2011	7082	0.88	166.23	7081.32	
6/12/2011	7175	1.06	163.94	7174.30	
6/12/2011	7360	1.14	189.43	7359.00	
6/12/2011	7456	1.23	192.24	7455.00	
6/13/2011	7549	1.23	206.70	7548.22	
6/13/2011	7611	1.14	211.58	7610.21	
6/13/2011	7674	1.14	207.98	7673.19	
6/13/2011	7799	1.14	202.53	7798.17	
6/13/2011	7892	1.23	204.55	0.00	
6/14/2011	7985	1.67	225.08	7984.12	
6/14/2011	8079	1.67	225.82	8078.08	
6/14/2011	8173	1.58	219.66	8172.04	
6/14/2011	8266	1.23	238.21	8265.02	
6/14/2011	8359	1.14	233.64	8358.00	
6/15/2011	8515	0.94	233.67	8513.97	
6/16/2011	8671	0.97	234.67	8669.95	
6/16/2011	8795	0.97	231.01	8793.93	
6/17/2011	8951	0.79	232.01	8949.91	
6/20/2011	8301	1.14	244.36	8300.01	
6/20/2011	8333	1.93	254.03	8332.00	
6/21/2011	8364	4.75	262.03	8362.94	
6/22/2011	8425	12.31	267.04	8423.24	
6/22/2011	8456	14.86	269.59	8453.37	
6/22/2011	8488	16.80	271.52	8484.00	
6/23/2011	8519	19.08	271.26	8513.64	
6/23/2011	8550	21.90	268.62	8542.68	
6/23/2011	8581	25.41	265.54	8571.01	
6/23/2011	8612	29.46	264.05	8598.56	
6/24/2011	8643	33.33	263.79	8625.04	
6/28/2011	8787	53.20	264.05	8729.46	
6/28/2011	8819	55.75	262.76	8748.05	
6/28/2011	8850	59.71	263.43	8764.60	
6/28/2011	8913	69.56	268.85	8791.56	
6/28/2011	8945	72.46	269.61	8801.97	
6/29/2011	9008	76.15	269.39	8819.21	
6/29/2011	9040	79.93	270.12	8825.84	
6/29/2011	9103	83.62	269.42	8834.87	
6/29/2011	9135	87.85	268.54	8837.25	
6/29/2011	9166	89.52	268.28	0.00	
6/30/2011	9181	89.72	270.50	8837.94	
7/1/2011	9213	90.56	272.14	8873.98	
7/1/2011	9244	91.29	272.75	8837.43	
7/1/2011	9339	92.41	272.67	8834.49	
7/1/2011	9371	92.24	271.91	8833.19	
7/1/2011	9434	91.46	272.00	8830.70	
7/1/2011	9466	90.78	272.32	8830.24	
7/1/2011	9497	91.18	272.31	8829.72	
7/1/2011	9529	90.17	272.26	8829.34	
7/1/2011	9624	90.78	272.31	8828.80	
7/1/2011	9656	91.12	272.57	8828.27	
7/1/2011	9687	90.28	272.24	8827.89	
7/2/2011	9719	90.11	272.05	8827.60	
7/2/2011	9751	90.50	272.16	8827.43	

#	Date	Depth	Deviation	Direction	TVD
	7/2/2011	9782	91.18	271.97	8826.98
	7/2/2011	9814	90.78	270.92	8826.43
	7/2/2011	9846	91.12	270.45	8826.08
	7/2/2011	9877	91.68	270.19	8825.33
	7/2/2011	9909	91.62	269.01	8824.40
	7/2/2011	9972	91.18	269.13	8822.42
	7/2/2011	10004	90.50	269.25	8822.08
	7/2/2011	10035	90.90	269.11	8821.65
	7/2/2011	10099	89.83	268.74	8819.98
	7/2/2011	10130	89.22	268.75	8821.07
	7/2/2011	10162	89.44	268.62	8821.62
	7/2/2011	10167	91.12	269.03	8821.08
	7/3/2011	10363	92.13	268.01	8817.08
	7/3/2011	10415	92.07	267.79	8815.91
	7/3/2011	10447	91.96	267.71	8814.78
	7/3/2011	10478	91.29	267.58	8813.90
	7/3/2011	10510	91.01	268.39	8813.26
	7/3/2011	10542	90.67	268.33	8812.79
	7/3/2011	10573	90.95	268.74	8812.35
	7/3/2011	10605	91.18	268.66	8811.76
	7/3/2011	10668	91.96	269.02	8810.22
	7/4/2011	10700	92.30	269.02	8809.03
	7/4/2011	10732	92.47	268.99	8807.70
	7/4/2011	10763	91.34	268.97	8807.70
	7/4/2011	10795	91.29	268.89	8805.94
	7/4/2011	11048	89.72	270.98	8804.22
	7/4/2011	11080	89.61	270.91	8804.38
	7/4/2011	11148	90.56	270.94	8804.19
	7/4/2011	11174	91.01	270.58	8804.19
	7/5/2011	11238	91.01	270.38	8801.06
	7/5/2011	11269	90.06	270.55	8802.77
	7/5/2011	11332	89.72	370.27	8802.95
	7/5/2011	11358	89.78	270.50	8802.82
	7/5/2011	11364	89.50	270.25	8803.17
	7/5/2011	11396	89.50	270.10	8803.45
	7/5/2011	11427	90.17	270.04	8803.54
	7/5/2011	11459	90.45	269.84	8803.36
	7/5/2011	11490	90.50	269.72	8803.11
	7/6/2011	11743	92.35	270.55	8794.13
	7/6/2011	11554	90.84	270.19	8802.17
	7/6/2011	11585	91.57	270.60	8801.52
	7/6/2011	11617	92.35	270.55	8800.42
	7/6/2011	11648	92.91	270.62	8799.00
	7/6/2011	11712	91.57	270.60	8795.88
	7/6/2011	11775	92.32	270.34	8792.74
	7/7/2011	11806	92.24	270.12	8789.28
	7/7/2011	11838	92.86	270.31	8790.08
	7/7/2011	11870	92.58	270.28	8788.56
	7/8/2011	11902	91.10	270.08	8787.30
	7/8/2011	11934	92.57	270.01	8786.07
	7/8/2011	11997	93.58	270.64	8782.65
	7/8/2011	12028	93.75	270.46	8780.67
	7/8/2011	12097	92.13	270.86	8777.50

#	Date	Depth	Deviation	Direction	TVD
	7/8/2011	12155	93.75	271.66	8774.03
	7/8/2011	12186	92.91	271.19	8772.21
	7/8/2011	12218	92.41	270.77	8770.77
	7/8/2011	12250	93.02	271.29	8769.21
	7/9/2011	12313	92.41	270.36	8766.30
	7/9/2011	12344	91.90	269.97	8765.14
	7/9/2011	12376	91.74	270.13	8764.14
	7/9/2011	12408	92.30	270.32	8763.01
	7/9/2011	12439	92.13	269.43	8761.81
	7/9/2011	12471	92.18	268.82	8760.61
	7/9/2011	12534	93.08	269.28	8757.75
	7/9/2011	12566	93.92	269.83	8755.80
	7/10/2011	12629	90.50	268.04	8753.01
	7/10/2011	12692	89.38	268.39	8753.24
	7/10/2011	12724	89.55	267.97	8753.54
	7/10/2011	12755	89.78	267.89	8753.72
	7/10/2011	12787	90.11	267.34	8753.75
	7/10/2011	12819	90.45	267.58	8753.32
	7/10/2011	12851	90.90	867.09	8753.22
	7/11/2011	12882	89.78	267.20	8753.01
	7/11/2011	12914	89.16	267.03	8753.31
	7/11/2011	12945	89.55	266.92	8753.66
	7/11/2011	12977	89.78	267.18	8753.87
	7/11/2011	13009	90.00	266.78	8753.91
	7/11/2011	13040	90.50	266.96	8753.79
	7/11/2011	13072	90.78	266.43	8753.44
	7/11/2011	13135	90.28	266.11	8753.08
	# EOF				

3329 W Pinhook Rd
Lafayette, LA 70508
Tel: (337) 233-3982
Fax (337) 234-2988

HOBBS OCD

AUG 26 2011

PATHFINDER

A Schlumberger Company

RECEIVED

DIRECTIONAL SURVEY REPORT

MACK ENERGY CORPORATION

JERRY STATE #1

CHAVES COUNTY, NM

RECEIVED

AUG 17 2011

NMOCD ARTESIA

PREPARED BY: PHIL LEBLANC

SUR: I-21-15s-31e, 2285/S & 330/E
BHL: L-21-15s-31e, 2235/S & 4958/E
API # 30-005-29186

3329 W Pinhook Rd
Lafayette, LA 70508
Tel: (337) 233-3982
Fax: (337) 234-2988



July 29, 2011

MACK ENERGY CORPORATION
Mr. Matt Brewer
11352 Lovington Hwy
Box 960
Artesia, NM 88211-1288

RE: MACK ENERGY CORPORATION
JERRY STATE #1
CHAVES COUNTY, NM
RIG: SILVER OAK 7
API Well No.: 30-005-29186
PES Job No.: 700002653-GC-WT

Dear Mr. Brewer:

We hereby certify that the enclosed Original Field Survey Data contained in this report represents to the best of our knowledge, a true and accurate survey of the well at the time the survey was run.

DIRECTIONAL SURVEY DATA

1 – Original Directional Survey Report
1 – Email PDF to:
charless@mec.com
carisadler@mec.com
chrismoreno@mec.com
mbrewer@mec.com
leel@mec.com
kevingarrett@mec.com
jimkrogman@mec.com

We appreciate the opportunity to work with you and we look forward to your business support. If you have any questions, I can be reached at (337) 233-3982.

Sincerely,

A handwritten signature in black ink, appearing to read "Phil LeBlanc".

Phil LeBlanc
M/LWD Service Coordinator
PathFinder Energy Services

PL:ll

DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
 - A) JOHN OVERTON
 - B) KIRK DAVIS
 - C) JESUS BARRAZA
 - D) JEREMY HOLMES
 - E) ZACH VEST
3. POSITION OF SAID PERSON(S): (A-E) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 06/12/11 TO 07/11/11
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: CHAVES COUNTY
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

MACK ENERGY CORPORATION
JERRY STATE #1
CHAVES COUNTY, NM
RIG: SILVER OAK 7
API Well No.: 30-005-29186
9. SURVEY(S) CERTIFIED FROM: 7,021 TO 13,256 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 4,628.52 FEET ON A BEARING OF 269.39 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 13,256 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



PHIL LEBLANC
M/LWD SERVICE COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 06/12/2011
Date Completed: 07/11/2011

MACK ENERGY CORPORATION
JERRY STATE #1
CHAVES COUNTY, NEW MEXICO
API#: 30-005-29186 Rig: SILVEROAK 7
PathFinder Office Supervisor: PHIL LEBLANC
PathFinder Field Engineers: JOHN OVERTON
 KIRK DAVIS
 JESUS BARRAZA

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 33.0.0.9494 N LON: 103.49.7.4864 W
GRID Reference: NAD27 new mexico east Transverse Mercator
Ref GRID Coord: X: 657764.2000 Y: 727994.6000
North Aligned To: GRID NORTH
Total Magnetic Correction: 7.48° EAST TO GRID
Vertical Section Plane: 269.74
Survey Vert. Reference: 18.00' Kelly Bushing To Ground
Altitude: 4409.00' Ground To MSL

SUR: I-21-15s-31e, 2285/S & 330/E
BHL: L-21-15s-31e, 2235/S & 4958/E
API # 30-005-29186

Measured Depth	13256.00	(feet)
Inclination	90.31	(deg)
Azimuth	267.12	(deg)
True Vertical Depth	8752.41	(feet)
Vertical Section	4628.44	(feet)
Survey X cord	653135.94	(feet)
Survey Y cord	727945.48	(feet)
Survey Lat	33.00019004 N	(deg)
Survey Lon	103.83384271 W	(deg)
Rectangular Corr. N/S	49.12 S	(feet)
Rectangular Corr. E/W	4628.26 W	(feet)
Closure Distance	4628.52	(feet)
Direction of Closure	269.39	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

MACK ENERGY CORPORATION

JERRY STATE #1

CHAVES COUNTY, NEW MEXICO

API#: 30-005-29186 Rig: SILVEROAK 7

PathFinder Office Supervisor: PHIL LEBLANC

PathFinder Field Engineers: JOHN OVERTON

KIRK DAVIS

JESUS BARRAZA

JEREMY HOLMES

ZACH VEST

Survey Calculations by RX5 V6.03E using Minimum Curvature

Survey Horiz. Reference: WELLHEAD

Ref Coordinates: LAT: 33.0.0.9494 N LON: 103.49.7.4864 W

GRID Reference: NAD27 new mexico east Transverse Mercator

Ref GRID Coord: X: 657764.2000 Y: 727994.6000

North Aligned To: GRID NORTH

Total Magnetic Correction: 7.48° EAST TO GRID

Vertical Section Plane: 269.74

Survey Vert. Reference: 18.00' Kelly Bushing To Ground

Altitude: 4409.00' Ground To MSL

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
THE FOLLOWING ARE TELEDRIFT MWD INCLINATION AND AZIMUTH SURVEYS CALCULATED USING PATHFINDER PATHCALC PROGRAM.												
600.00	0.00	340.80	600.00	0.00	-1.27	1.18 S	1.27 E	33.00026047 N	103.81874209 W	1.74@	132.93	0.00
807.00	0.30	192.80	807.00	207.00	-1.14	1.71 S	1.15 E	33.00025902 N	103.81874249 W	2.06@	146.07	0.14
987.00	0.40	199.80	986.99	180.00	-0.82	2.76 S	0.83 E	33.00025613 N	103.81874354 W	2.88@	163.20	0.06
1173.00	0.40	172.80	1172.99	186.00	-0.68	4.02 S	0.70 E	33.00025268 N	103.81874402 W	4.08@	170.18	0.10
1408.00	1.00	154.80	1407.97	235.00	-1.64	6.69 S	1.67 E	33.00024534 N	103.81874088 W	6.89@	165.97	0.27
1535.00	0.80	209.80	1534.96	127.00	-1.66	8.46 S	1.70 E	33.00024046 N	103.81874080 W	8.63@	168.62	0.67
1692.00	0.80	178.80	1691.94	157.00	-1.13	10.50 S	1.18 E	33.00023484 N	103.81874254 W	10.57@	173.59	0.27
1848.00	0.20	167.80	1847.93	156.00	-1.21	11.86 S	1.26 E	33.00023112 N	103.81874230 W	11.93@	173.93	0.39
2004.00	0.50	62.80	2003.93	156.00	-1.87	11.81 S	1.92 E	33.00023123 N	103.81874013 W	11.97@	170.75	0.38
2157.00	1.90	46.80	2156.90	153.00	-4.32	9.77 S	4.37 E	33.00023681 N	103.81873213 W	10.70@	155.93	0.93
2313.00	2.80	62.80	2312.76	156.00	-9.61	6.26 S	9.64 E	33.00024639 N	103.81871487 W	11.50@	123.00	0.71
2438.00	2.00	68.80	2437.65	125.00	-14.37	4.08 S	14.39 E	33.00025233 N	103.81869935 W	14.96@	105.82	0.67
2501.00	2.00	62.80	2500.62	63.00	-16.38	3.18 S	16.39 E	33.00025478 N	103.81869280 W	16.70@	100.97	0.33
2657.00	1.60	59.80	2656.54	156.00	-20.69	0.84 S	20.70 E	33.00026115 N	103.81867873 W	20.71@	92.32	0.26
2813.00	0.50	41.80	2812.51	156.00	-23.04	0.77 N	23.03 E	33.00026553 N	103.81867108 W	23.05@	88.10	0.73
3000.00	0.90	30.80	2999.50	187.00	-24.34	2.64 N	24.33 E	33.00027065 N	103.81866683 W	24.47@	83.82	0.23
3092.00	0.40	2.80	3091.49	92.00	-24.73	3.58 N	24.71 E	33.00027323 N	103.81866555 W	24.97@	81.76	0.63
3372.00	0.10	65.80	3371.49	280.00	-25.01	4.65 N	24.98 E	33.00027619 N	103.81866466 W	25.41@	79.45	0.13
3527.00	0.10	61.80	3526.49	155.00	-25.25	4.77 N	25.23 E	33.00027651 N	103.81866386 W	25.67@	79.29	0.01
3684.00	1.30	52.80	3683.47	157.00	-26.79	5.91 N	26.77 E	33.00027963 N	103.81865882 W	27.41@	77.54	0.76
3783.00	0.20	89.80	3782.46	99.00	-27.86	6.59 N	27.83 E	33.00028148 N	103.81865533 W	28.60@	76.67	1.16
3901.00	0.30	15.80	3900.46	118.00	-28.15	6.89 N	28.12 E	33.00028230 N	103.81865438 W	28.96@	76.23	0.26
3963.00	0.50	353.80	3962.46	62.00	-28.17	7.32 N	28.14 E	33.00028347 N	103.81865432 W	29.07@	75.42	0.40
4025.00	0.80	292.80	4024.46	62.00	-27.75	7.75 N	27.71 E	33.00028467 N	103.81865571 W	28.77@	74.37	1.14
4087.00	0.70	294.80	4086.45	62.00	-27.00	8.08 N	26.97 E	33.00028558 N	103.81865813 W	28.15@	73.32	0.17

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist (ft)	Dir (deg)	DLS (dg/100ft)
4150.00	1.00	335.80	4149.45	63.00	-26.43	8.74 N	26.39 E	33.00028741 N	103.81866000 W	27.80@	71.67	1.04
4274.00	0.67	291.80	4273.43	124.00	-25.32	10.00 N	25.28 E	33.00029088 N	103.81866362 W	27.18@	68.42	0.56
4399.00	0.50	317.80	4398.43	125.00	-24.28	10.67 N	24.23 E	33.00029275 N	103.81866702 W	26.48@	66.22	0.25
4525.00	0.90	309.80	4524.42	126.00	-23.15	11.72 N	23.10 E	33.00029562 N	103.81867068 W	25.90@	63.11	0.33
4646.00	0.90	321.80	4645.40	121.00	-21.84	13.07 N	21.78 E	33.00029937 N	103.81867496 W	25.40@	59.04	0.16
4767.00	0.30	270.80	4766.40	121.00	-20.94	13.82 N	20.88 E	33.00030144 N	103.81867790 W	25.04@	56.50	0.62
4866.00	0.70	323.80	4865.39	99.00	-20.33	14.31 N	20.26 E	33.00030280 N	103.81867990 W	24.81@	54.76	0.58
4991.00	0.40	291.80	4990.39	125.00	-19.48	15.09 N	19.41 E	33.00030495 N	103.81868268 W	24.58@	52.13	0.34
5084.00	1.00	286.80	5083.38	93.00	-18.40	15.45 N	18.33 E	33.00030594 N	103.81868619 W	23.97@	49.88	0.65
5146.00	1.30	314.80	5145.37	62.00	-17.38	16.10 N	17.31 E	33.00030775 N	103.81868950 W	23.64@	47.08	1.01
5247.00	0.80	343.80	5246.35	101.00	-16.38	17.58 N	16.30 E	33.00031184 N	103.81869277 W	23.98@	42.84	0.71
5309.00	0.50	251.80	5308.35	62.00	-16.01	17.91 N	15.92 E	33.00031276 N	103.81869399 W	23.97@	41.63	1.55
5371.00	0.70	328.80	5370.35	62.00	-15.55	18.15 N	15.47 E	33.00031342 N	103.81869547 W	23.85@	40.44	1.23
5435.00	0.90	9.80	5434.34	64.00	-15.44	18.98 N	15.35 E	33.00031570 N	103.81869584 W	24.42@	38.97	0.92
5496.00	0.10	334.80	5495.34	61.00	-15.50	19.50 N	15.41 E	33.00031713 N	103.81869564 W	24.86@	38.32	1.34
5619.00	0.00	322.80	5618.34	123.00	-15.46	19.60 N	15.37 E	33.00031740 N	103.81869578 W	24.91@	38.10	0.08
5745.00	0.60	302.80	5744.33	126.00	-14.90	19.96 N	14.81 E	33.00031839 N	103.81869759 W	24.85@	36.58	0.48
5807.00	0.30	104.80	5806.33	62.00	-14.79	20.09 N	14.70 E	33.00031876 N	103.81869796 W	24.89@	36.18	1.44
5869.00	0.10	173.80	5868.33	62.00	-14.95	20.00 N	14.86 E	33.00031850 N	103.81869743 W	24.91@	36.62	0.45
5994.00	0.60	40.80	5993.33	125.00	-15.39	20.38 N	15.30 E	33.00031956 N	103.81869599 W	25.49@	36.89	0.54
6118.00	0.20	277.80	6117.33	124.00	-15.60	20.91 N	15.51 E	33.00032098 N	103.81869530 W	26.03@	36.57	0.59
6242.00	0.20	337.80	6241.33	124.00	-15.31	21.14 N	15.21 E	33.00032162 N	103.81869626 W	26.04@	35.75	0.16
6366.00	0.10	277.80	6365.33	124.00	-15.12	21.35 N	15.02 E	33.00032221 N	103.81869688 W	26.11@	35.13	0.14
6491.00	0.40	89.80	6490.33	125.00	-15.45	21.37 N	15.35 E	33.00032225 N	103.81869581 W	26.31@	35.70	0.40
6616.00	0.30	286.80	6615.33	125.00	-15.57	21.46 N	15.48 E	33.00032252 N	103.81869540 W	26.46@	35.79	0.55
6741.00	0.40	210.80	6740.32	125.00	-15.03	21.18 N	14.94 E	33.00032175 N	103.81869716 W	25.92@	35.19	0.35

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
6867.00	0.40	306.80	6866.32	126.00	-14.46	21.07 N	14.36 E	33.00032145 N	103.81869904 W	25.50@	34.28	0.47
** TIED INTO TELEDRIFT MWD INCLINATION AND AZIMUTH SURVEYS AT 6989' MD.												
6989.00	0.30	352.80	6988.32	122.00	-14.08	21.64 N	13.98 E	33.00032302 N	103.81870028 W	25.76@	32.86	0.24
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.												
7021.00	0.35	227.05	7020.32	32.00	-14.00	21.66 N	13.90 E	33.00032307 N	103.81870054 W	25.73@	32.69	1.81
7082.00	0.88	166.23	7081.32	61.00	-13.97	21.07 N	13.87 E	33.00032147 N	103.81870063 W	25.23@	33.36	1.27
7175.00	1.06	163.94	7174.30	93.00	-14.37	19.55 N	14.28 E	33.00031729 N	103.81869933 W	24.21@	36.14	0.20
7269.00	1.32	186.88	7268.28	94.00	-14.47	17.64 N	14.39 E	33.00031203 N	103.81869900 W	22.77@	39.20	0.57
7360.00	1.14	189.43	7359.26	91.00	-14.19	15.71 N	14.12 E	33.00030672 N	103.81869992 W	21.12@	41.94	0.21
7456.00	1.23	192.24	7455.24	96.00	-13.81	13.76 N	13.74 E	33.00030137 N	103.81870117 W	19.45@	44.96	0.11
7549.00	1.23	206.57	7548.22	93.00	-13.14	11.89 N	13.09 E	33.00029625 N	103.81870335 W	17.68@	47.73	0.33
7611.00	1.14	211.58	7610.21	62.00	-12.51	10.77 N	12.46 E	33.00029317 N	103.81870539 W	16.47@	49.16	0.22
7674.00	1.14	207.98	7673.20	63.00	-11.89	9.69 N	11.84 E	33.00029019 N	103.81870744 W	15.30@	50.72	0.11
7799.00	1.14	202.53	7798.17	125.00	-10.82	7.44 N	10.78 E	33.00028403 N	103.81871093 W	13.10@	55.40	0.09
7892.00	1.23	204.55	7891.15	93.00	-10.04	5.68 N	10.01 E	33.00027920 N	103.81871347 W	11.51@	60.45	0.11
7985.00	1.67	225.20	7984.12	93.00	-8.65	3.81 N	8.64 E	33.00027410 N	103.81871799 W	9.44@	66.18	0.73
8079.00	1.67	225.82	8078.08	94.00	-6.69	1.89 N	6.68 E	33.00026885 N	103.81872439 W	6.95@	74.18	0.02
8173.00	1.58	219.66	8172.04	94.00	-4.87	0.06 S	4.87 E	33.00026351 N	103.81873033 W	4.87@	90.69	0.21
8266.00	1.23	238.21	8265.02	93.00	-3.20	1.57 S	3.21 E	33.00025937 N	103.81873579 W	3.57@	116.11	0.61
8301.00	1.14	244.36	8300.01	35.00	-2.56	1.92 S	2.57 E	33.00025842 N	103.81873786 W	3.21@	126.73	0.45
8333.00	1.93	254.03	8332.00	32.00	-1.76	2.21 S	1.77 E	33.00025765 N	103.81874049 W	2.83@	141.29	2.59
8364.00	4.75	262.03	8362.94	31.00	0.02	2.53 S	0.01 W	33.00025679 N	103.81874628 W	2.53@	180.12	9.20
8394.00	8.35	264.49	8392.74	30.00	3.42	2.91 S	3.40 W	33.00025578 N	103.81875737 W	4.48@	229.48	12.03
8424.00	12.31	267.04	8422.25	30.00	8.78	3.28 S	8.77 W	33.00025483 N	103.81877487 W	9.36@	249.47	13.28
8456.00	14.86	269.59	8453.35	32.00	16.30	3.49 S	16.28 W	33.00025436 N	103.81879937 W	16.65@	257.90	8.18
8488.00	16.80	271.52	8484.14	32.00	25.02	3.40 S	25.01 W	33.00025474 N	103.81882784 W	25.24@	262.27	6.28
8519.00	19.08	271.26	8513.63	31.00	34.57	3.17 S	34.55 W	33.00025550 N	103.81885897 W	34.70@	264.76	7.36

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
8550.00	21.90	268.62	8542.66	31.00	45.41	3.19 S	45.40 W	33.00025557 N	103.81889435 W	45.51@	265.98	9.57
8581.00	25.41	265.54	8571.06	31.00	57.83	3.85 S	57.81 W	33.00025393 N	103.81893485 W	57.94@	266.19	12.00
8612.00	29.46	264.05	8598.56	31.00	72.06	5.16 S	72.03 W	33.00025052 N	103.81898125 W	72.22@	265.90	13.25
8643.00	33.33	263.79	8625.02	31.00	88.12	6.87 S	88.09 W	33.00024603 N	103.81903364 W	88.36@	265.54	12.49
8674.00	37.64	264.58	8650.26	31.00	106.03	8.69 S	105.99 W	33.00024128 N	103.81909205 W	106.34@	265.31	13.98
8702.00	41.33	265.10	8671.86	28.00	123.76	10.28 S	123.72 W	33.00023713 N	103.81914990 W	124.14@	265.25	13.23
8787.00	53.20	264.05	8729.44	85.00	185.82	16.23 S	185.75 W	33.00022162 N	103.81935233 W	186.46@	265.01	13.99
8819.00	55.75	262.73	8748.04	32.00	211.70	19.23 S	211.62 W	33.00021371 N	103.81943675 W	212.49@	264.81	8.65
8850.00	59.71	263.43	8764.58	31.00	237.73	22.39 S	237.63 W	33.00020539 N	103.81952165 W	238.69@	264.62	12.92
8882.00	64.72	265.90	8779.50	32.00	265.92	25.00 S	265.81 W	33.00019858 N	103.81961360 W	266.98@	264.63	17.08
8913.00	69.56	268.85	8791.54	31.00	294.45	26.30 S	294.33 W	33.00019540 N	103.81970665 W	295.51@	264.89	17.91
8945.00	72.46	269.61	8801.95	32.00	324.70	26.70 S	324.59 W	33.00019470 N	103.81980533 W	325.68@	265.30	9.34
8977.00	73.95	269.76	8811.20	32.00	355.34	26.87 S	355.22 W	33.00019465 N	103.81990525 W	356.24@	265.67	4.68
9008.00	76.15	269.39	8819.19	31.00	385.29	27.09 S	385.17 W	33.00019443 N	103.82000293 W	386.12@	265.98	7.19
9040.00	79.93	270.12	8825.82	32.00	416.59	27.23 S	416.47 W	33.00019449 N	103.82010502 W	417.36@	266.26	12.02
9071.00	81.69	270.56	8830.77	31.00	447.19	27.05 S	447.07 W	33.00019540 N	103.82020482 W	447.89@	266.54	5.85
9103.00	83.62	269.42	8834.87	32.00	478.92	27.05 S	478.80 W	33.00019581 N	103.82030833 W	479.57@	266.77	6.99
9135.00	87.85	268.54	8837.24	32.00	510.82	27.62 S	510.70 W	33.00019467 N	103.82041238 W	511.45@	266.90	13.50
9166.00	89.52	268.28	8837.96	31.00	541.80	28.48 S	541.68 W	33.00019273 N	103.82051344 W	542.43@	266.99	5.45
9181.00	89.72	270.50	8838.06	15.00	556.80	28.64 S	556.68 W	33.00019249 N	103.82056236 W	557.42@	267.05	14.86
9213.00	90.56	272.14	8837.98	32.00	588.79	27.90 S	588.67 W	33.00019494 N	103.82066668 W	589.33@	267.29	5.76
9244.00	91.29	272.75	8837.48	31.00	619.75	26.58 S	619.64 W	33.00019899 N	103.82076767 W	620.21@	267.54	3.07
9276.00	91.62	272.66	8836.66	32.00	651.70	25.07 S	651.59 W	33.00020357 N	103.82087187 W	652.07@	267.80	1.07
9308.00	91.96	272.69	8835.66	32.00	683.64	23.58 S	683.54 W	33.00020810 N	103.82097605 W	683.95@	268.02	1.07
9339.00	92.41	272.67	8834.48	31.00	714.58	22.13 S	714.48 W	33.00021249 N	103.82107695 W	714.83@	268.23	1.45
9371.00	92.24	271.91	8833.19	32.00	746.52	20.85 S	746.43 W	33.00021643 N	103.82118113 W	746.72@	268.40	2.43

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
9403.00	92.35	271.60	8831.90	32.00	778.47	19.87 S	778.39 W	33.00021955 N	103.82128536 W	778.64@	268.54	1.03
9434.00	91.46	272.00	8830.87	31.00	809.43	18.90 S	809.36 W	33.00022264 N	103.82138635 W	809.58@	268.66	3.15
9466.00	90.78	272.32	8830.25	32.00	841.40	17.69 S	841.33 W	33.00022638 N	103.82149061 W	841.51@	268.80	2.35
9497.00	91.18	272.31	8829.72	31.00	872.36	16.44 S	872.30 W	33.00023024 N	103.82159160 W	872.45@	268.92	1.29
9529.00	90.17	272.26	8829.34	32.00	904.33	15.17 S	904.27 W	33.00023417 N	103.82169586 W	904.40@	269.04	3.16
9561.00	90.00	272.42	8829.29	32.00	936.30	13.86 S	936.24 W	33.00023819 N	103.82180012 W	936.35@	269.15	0.73
9592.00	90.50	272.41	8829.16	31.00	967.26	12.55 S	967.22 W	33.00024220 N	103.82190112 W	967.30@	269.26	1.61
9624.00	90.78	272.31	8828.80	32.00	999.23	11.24 S	999.19 W	33.00024624 N	103.82200538 W	999.25@	269.36	0.93
9656.00	91.12	272.57	8828.27	32.00	1031.19	9.87 S	1031.15 W	33.00025041 N	103.82210962 W	1031.20@	269.45	1.34
9687.00	90.28	272.24	8827.89	31.00	1062.15	8.57 S	1062.12 W	33.00025440 N	103.82221061 W	1062.16@	269.54	2.91
9719.00	90.11	272.05	8827.78	32.00	1094.12	7.38 S	1094.10 W	33.00025812 N	103.82231489 W	1094.12@	269.61	0.80
9751.00	90.50	272.16	8827.61	32.00	1126.09	6.20 S	1126.08 W	33.00026178 N	103.82241917 W	1126.10@	269.68	1.27
9782.00	91.18	271.97	8827.16	31.00	1157.07	5.08 S	1157.05 W	33.00026526 N	103.82252019 W	1157.07@	269.75	2.28
9814.00	90.78	270.92	8826.61	32.00	1189.05	4.28 S	1189.04 W	33.00026791 N	103.82262450 W	1189.05@	269.79	3.51
9846.00	91.12	270.45	8826.08	32.00	1221.04	3.89 S	1221.03 W	33.00026939 N	103.82272884 W	1221.04@	269.82	1.81
9877.00	91.68	270.19	8825.32	31.00	1252.03	3.72 S	1252.02 W	33.00027027 N	103.82282992 W	1252.03@	269.83	1.99
9909.00	91.62	269.01	8824.40	32.00	1284.01	3.94 S	1284.01 W	33.00027009 N	103.82293425 W	1284.01@	269.82	3.69
9941.00	92.07	268.87	8823.37	32.00	1315.99	4.54 S	1315.99 W	33.00026889 N	103.82303856 W	1315.99@	269.80	1.47
9972.00	91.18	269.13	8822.49	31.00	1346.98	5.08 S	1346.97 W	33.00026781 N	103.82313962 W	1346.98@	269.78	2.99
10004.00	90.50	269.25	8822.02	32.00	1378.97	5.53 S	1378.96 W	33.00026700 N	103.82324398 W	1378.97@	269.77	2.16
10035.00	90.90	269.11	8821.64	31.00	1409.97	5.97 S	1409.96 W	33.00026619 N	103.82334508 W	1409.97@	269.76	1.37
10067.00	91.12	269.03	8821.08	32.00	1441.96	6.49 S	1441.95 W	33.00026519 N	103.82344943 W	1441.96@	269.74	0.73
10099.00	89.83	268.74	8820.81	32.00	1473.96	7.11 S	1473.94 W	33.00026391 N	103.82355378 W	1473.96@	269.72	4.13
10130.00	89.22	268.75	8821.07	31.00	1504.95	7.79 S	1504.93 W	33.00026245 N	103.82365488 W	1504.95@	269.70	1.97
10162.00	89.44	268.62	8821.45	32.00	1536.94	8.53 S	1536.92 W	33.00026086 N	103.82375923 W	1536.94@	269.68	0.80
10194.00	89.72	268.50	8821.68	32.00	1568.93	9.33 S	1568.91 W	33.00025908 N	103.82386357 W	1568.94@	269.66	0.95

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 CHAVES COUNTY, NEW MEXICO
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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
10225.00	90.50	268.61	8821.62	31.00	1599.93	10.11 S	1599.90 W	33.00025734 N	103.82396467 W	1599.93@	269.64	2.54
10257.00	91.40	268.49	8821.09	32.00	1631.92	10.92 S	1631.88 W	33.00025554 N	103.82406900 W	1631.92@	269.62	2.84
10289.00	91.68	268.27	8820.23	32.00	1663.90	11.83 S	1663.86 W	33.00025348 N	103.82417331 W	1663.90@	269.59	1.11
10320.00	91.79	268.14	8819.29	31.00	1694.87	12.80 S	1694.83 W	33.00025122 N	103.82427434 W	1694.88@	269.57	0.55
10352.00	92.07	268.29	8818.21	32.00	1726.84	13.79 S	1726.80 W	33.00024891 N	103.82437862 W	1726.85@	269.54	0.99
10383.00	92.13	268.02	8817.08	31.00	1757.81	14.79 S	1757.76 W	33.00024658 N	103.82447962 W	1757.82@	269.52	0.89
10415.00	92.07	267.79	8815.90	32.00	1789.77	15.96 S	1789.72 W	33.00024379 N	103.82458387 W	1789.79@	269.49	0.74
10447.00	91.96	267.71	8814.78	32.00	1821.73	17.22 S	1821.67 W	33.00024077 N	103.82468812 W	1821.75@	269.46	0.42
10478.00	91.29	267.58	8813.90	31.00	1852.70	18.49 S	1852.63 W	33.00023768 N	103.82478912 W	1852.72@	269.43	2.20
10510.00	91.01	268.39	8813.26	32.00	1884.68	19.61 S	1884.61 W	33.00023501 N	103.82489343 W	1884.71@	269.40	2.68
10542.00	90.67	268.33	8812.79	32.00	1916.66	20.53 S	1916.59 W	33.00023292 N	103.82499776 W	1916.70@	269.39	1.08
10573.00	90.95	268.74	8812.35	31.00	1947.65	21.32 S	1947.58 W	33.00023115 N	103.82509884 W	1947.69@	269.37	1.60
10605.00	91.18	268.66	8811.76	32.00	1979.64	22.05 S	1979.56 W	33.00022958 N	103.82520318 W	1979.69@	269.36	0.76
10637.00	91.23	268.67	8811.08	32.00	2011.63	22.79 S	2011.55 W	33.00022796 N	103.82530751 W	2011.68@	269.35	0.16
10668.00	91.96	269.02	8810.22	31.00	2042.61	23.42 S	2042.53 W	33.00022665 N	103.82540857 W	2042.66@	269.34	2.61
10700.00	92.30	269.02	8809.03	32.00	2074.59	23.97 S	2074.50 W	33.00022557 N	103.82551286 W	2074.64@	269.34	1.06
10732.00	92.47	268.99	8807.70	32.00	2106.56	24.52 S	2106.47 W	33.00022447 N	103.82561714 W	2106.61@	269.33	0.54
10763.00	91.34	268.97	8806.67	31.00	2137.54	25.07 S	2137.45 W	33.00022337 N	103.82571819 W	2137.59@	269.33	3.65
10795.00	91.29	268.89	8805.93	32.00	2169.53	25.67 S	2169.43 W	33.00022215 N	103.82582252 W	2169.58@	269.32	0.30
10827.00	91.57	268.90	8805.14	32.00	2201.51	26.29 S	2201.42 W	33.00022088 N	103.82592685 W	2201.57@	269.32	0.87
10858.00	90.34	268.90	8804.62	31.00	2232.50	26.88 S	2232.41 W	33.00021965 N	103.82602794 W	2232.57@	269.31	3.97
10890.00	90.39	268.91	8804.42	32.00	2264.50	27.49 S	2264.40 W	33.00021840 N	103.82613230 W	2264.57@	269.30	0.16
10922.00	90.28	269.42	8804.23	32.00	2296.50	27.96 S	2296.40 W	33.00021754 N	103.82623667 W	2296.57@	269.30	1.63
10953.00	90.11	269.56	8804.12	31.00	2327.50	28.23 S	2327.39 W	33.00021719 N	103.82633778 W	2327.56@	269.30	0.71
10985.00	90.06	269.62	8804.07	32.00	2359.50	28.46 S	2359.39 W	33.00021698 N	103.82644215 W	2359.56@	269.31	0.24
11016.00	89.89	270.61	8804.09	31.00	2390.50	28.40 S	2390.39 W	33.00021757 N	103.82654326 W	2390.56@	269.32	3.24

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
11048.00	89.72	270.98	8804.20	32.00	2422.49	27.96 S	2422.39 W	33.00021921 N	103.82664761 W	2422.55@	269.34	1.27
11080.00	89.61	270.91	8804.38	32.00	2454.48	27.43 S	2454.38 W	33.00022108 N	103.82675196 W	2454.54@	269.36	0.41
11111.00	89.50	270.68	8804.63	31.00	2485.48	27.00 S	2485.38 W	33.00022268 N	103.82685305 W	2485.53@	269.38	0.82
11143.00	90.56	270.74	8804.61	32.00	2517.47	26.60 S	2517.38 W	33.00022419 N	103.82695741 W	2517.52@	269.39	3.32
11174.00	91.01	270.58	8804.18	31.00	2548.47	26.25 S	2548.37 W	33.00022558 N	103.82705850 W	2548.51@	269.41	1.54
11206.00	91.01	270.62	8803.62	32.00	2580.46	25.91 S	2580.37 W	33.00022692 N	103.82716284 W	2580.50@	269.42	0.13
11238.00	91.01	270.38	8803.06	32.00	2612.45	25.63 S	2612.36 W	33.00022812 N	103.82726719 W	2612.48@	269.44	0.75
11269.00	90.06	270.55	8802.77	31.00	2643.44	25.38 S	2643.36 W	33.00022922 N	103.82736829 W	2643.48@	269.45	3.11
11301.00	89.78	270.50	8802.81	32.00	2675.44	25.09 S	2675.35 W	33.00023045 N	103.82747265 W	2675.47@	269.46	0.89
11332.00	89.72	270.27	8802.95	31.00	2706.44	24.88 S	2706.35 W	33.00023143 N	103.82757376 W	2706.47@	269.47	0.77
11364.00	89.50	270.25	8803.16	32.00	2738.44	24.73 S	2738.35 W	33.00023225 N	103.82767812 W	2738.46@	269.48	0.69
11396.00	89.50	270.10	8803.44	32.00	2770.43	24.64 S	2770.35 W	33.00023294 N	103.82778249 W	2770.46@	269.49	0.47
11427.00	90.17	270.04	8803.53	31.00	2801.43	24.60 S	2801.35 W	33.00023345 N	103.82788360 W	2801.46@	269.50	2.17
11459.00	90.45	269.84	8803.36	32.00	2833.43	24.63 S	2833.35 W	33.00023378 N	103.82798797 W	2833.46@	269.50	1.08
11490.00	90.50	269.72	8803.10	31.00	2864.43	24.75 S	2864.35 W	33.00023387 N	103.82808907 W	2864.46@	269.50	0.42
11522.00	91.01	270.24	8802.68	32.00	2896.43	24.76 S	2896.35 W	33.00023426 N	103.82819344 W	2896.45@	269.51	2.28
11554.00	90.84	270.19	8802.16	32.00	2928.42	24.64 S	2928.34 W	33.00023501 N	103.82829780 W	2928.45@	269.52	0.55
11585.00	91.57	270.44	8801.51	31.00	2959.41	24.47 S	2959.33 W	33.00023589 N	103.82839888 W	2959.44@	269.53	2.49
11617.00	92.35	270.55	8800.42	32.00	2991.39	24.20 S	2991.31 W	33.00023707 N	103.82850318 W	2991.41@	269.54	2.46
11648.00	92.91	270.62	8799.00	31.00	3022.36	23.88 S	3022.28 W	33.00023835 N	103.82860417 W	3022.37@	269.55	1.82
11680.00	93.36	270.98	8797.25	32.00	3054.30	23.43 S	3054.23 W	33.00023999 N	103.82870837 W	3054.32@	269.56	1.80
11712.00	92.63	270.60	8795.57	32.00	3086.25	22.99 S	3086.18 W	33.00024163 N	103.82881259 W	3086.27@	269.57	2.57
11743.00	92.69	270.57	8794.13	31.00	3117.22	22.68 S	3117.15 W	33.00024290 N	103.82891358 W	3117.23@	269.58	0.22
11775.00	92.35	270.34	8792.73	32.00	3149.18	22.42 S	3149.11 W	33.00024402 N	103.82901784 W	3149.19@	269.59	1.28
11806.00	92.24	270.12	8791.49	31.00	3180.16	22.30 S	3180.09 W	33.00024477 N	103.82911887 W	3180.17@	269.60	0.79
11838.00	92.86	270.31	8790.06	32.00	3212.13	22.18 S	3212.06 W	33.00024552 N	103.82922313 W	3212.13@	269.60	2.03

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
11870.00	92.58	270.29	8788.54	32.00	3244.09	22.01 S	3244.02 W	33.00024640 N	103.82932739 W	3244.10@	269.61	0.88
11902.00	91.90	270.08	8787.29	32.00	3276.06	21.91 S	3276.00 W	33.00024711 N	103.82943167 W	3276.07@	269.62	2.22
11934.00	92.57	270.01	8786.05	32.00	3308.04	21.88 S	3307.97 W	33.00024760 N	103.82953597 W	3308.04@	269.62	2.10
11965.00	93.13	270.18	8784.50	31.00	3339.00	21.83 S	3338.93 W	33.00024815 N	103.82963695 W	3339.00@	269.63	1.89
11997.00	93.58	270.64	8782.63	32.00	3370.94	21.60 S	3370.88 W	33.00024920 N	103.82974114 W	3370.95@	269.63	2.01
12028.00	93.75	270.46	8780.65	31.00	3401.87	21.31 S	3401.81 W	33.00025042 N	103.82984203 W	3401.88@	269.64	0.80
12060.00	92.74	270.66	8778.84	32.00	3433.82	20.99 S	3433.76 W	33.00025170 N	103.82994623 W	3433.82@	269.65	3.22
12092.00	92.13	270.86	8777.48	32.00	3465.78	20.57 S	3465.73 W	33.00025328 N	103.83005049 W	3465.79@	269.66	2.01
12123.00	93.36	271.54	8775.99	31.00	3496.74	19.92 S	3496.68 W	33.00025547 N	103.83015145 W	3496.74@	269.67	4.53
12155.00	93.75	271.66	8774.01	32.00	3528.66	19.03 S	3528.61 W	33.00025834 N	103.83025557 W	3528.66@	269.69	1.27
12186.00	92.91	271.19	8772.21	31.00	3559.59	18.26 S	3559.55 W	33.00026086 N	103.83035646 W	3559.59@	269.71	3.10
12218.00	92.41	270.77	8770.72	32.00	3591.55	17.71 S	3591.51 W	33.00026279 N	103.83046070 W	3591.55@	269.72	2.04
12250.00	93.02	271.29	8769.21	32.00	3623.51	17.14 S	3623.47 W	33.00026479 N	103.83056493 W	3623.51@	269.73	2.50
12281.00	92.58	270.61	8767.69	31.00	3654.46	16.62 S	3654.43 W	33.00026660 N	103.83066589 W	3654.46@	269.74	2.61
12313.00	92.41	270.76	8766.30	32.00	3686.43	16.24 S	3686.39 W	33.00026807 N	103.83077015 W	3686.43@	269.75	0.71
12344.00	91.90	269.97	8765.14	31.00	3717.40	16.05 S	3717.37 W	33.00026902 N	103.83087119 W	3717.40@	269.75	3.03
12376.00	91.74	270.13	8764.12	32.00	3749.39	16.02 S	3749.35 W	33.00026952 N	103.83097551 W	3749.39@	269.76	0.71
12408.00	92.30	270.32	8762.99	32.00	3781.37	15.89 S	3781.33 W	33.00027028 N	103.83107981 W	3781.37@	269.76	1.85
12439.00	92.13	269.43	8761.79	31.00	3812.34	15.96 S	3812.31 W	33.00027051 N	103.83118084 W	3812.34@	269.76	2.92
12471.00	92.18	268.82	8760.59	32.00	3844.32	16.45 S	3844.28 W	33.00026958 N	103.83128514 W	3844.32@	269.75	1.91
12503.00	92.58	269.18	8759.26	32.00	3876.29	17.01 S	3876.25 W	33.00026847 N	103.83138941 W	3876.29@	269.75	1.68
12534.00	93.08	269.28	8757.73	31.00	3907.25	17.42 S	3907.21 W	33.00026773 N	103.83149040 W	3907.25@	269.74	1.65
12566.00	93.92	269.83	8755.78	32.00	3939.19	17.67 S	3939.15 W	33.00026747 N	103.83159457 W	3939.19@	269.74	3.14
12597.00	92.86	269.92	8753.94	31.00	3970.13	17.74 S	3970.09 W	33.00026769 N	103.83169551 W	3970.13@	269.74	3.43
12629.00	90.50	268.04	8753.01	32.00	4002.11	18.31 S	4002.07 W	33.00026654 N	103.83179982 W	4002.11@	269.74	9.43
12661.00	89.66	267.94	8752.96	32.00	4034.10	19.43 S	4034.05 W	33.00026387 N	103.83190414 W	4034.10@	269.72	2.64

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
12692.00	89.38	268.39	8753.22	31.00	4065.09	20.42 S	4065.03 W	33.00026155 N	103.83200521 W	4065.09@	269.71	1.71
12724.00	89.55	267.97	8753.52	32.00	4097.07	21.44 S	4097.02 W	33.00025918 N	103.83210954 W	4097.07@	269.70	1.42
12755.00	89.78	267.89	8753.70	31.00	4128.06	22.56 S	4128.00 W	33.00025651 N	103.83221060 W	4128.06@	269.69	0.79
12787.00	90.11	267.34	8753.73	32.00	4160.03	23.89 S	4159.97 W	33.00025326 N	103.83231490 W	4160.04@	269.67	2.00
12819.00	90.45	267.58	8753.58	32.00	4192.01	25.31 S	4191.94 W	33.00024979 N	103.83241920 W	4192.01@	269.65	1.30
12851.00	90.90	267.09	8753.20	32.00	4223.98	26.80 S	4223.90 W	33.00024611 N	103.83252347 W	4223.98@	269.64	2.08
12882.00	89.78	267.20	8753.01	31.00	4254.95	28.34 S	4254.86 W	33.00024228 N	103.83262448 W	4254.95@	269.62	3.63
12914.00	89.16	267.03	8753.31	32.00	4286.91	29.95 S	4286.82 W	33.00023827 N	103.83272874 W	4286.92@	269.60	2.01
12945.00	89.55	266.92	8753.66	31.00	4317.87	31.59 S	4317.77 W	33.00023418 N	103.83282973 W	4317.89@	269.58	1.31
12977.00	89.78	267.18	8753.85	32.00	4349.84	33.23 S	4349.73 W	33.00023007 N	103.83293398 W	4349.86@	269.56	1.08
13009.00	90.00	266.78	8753.91	32.00	4381.80	34.92 S	4381.68 W	33.00022585 N	103.83303824 W	4381.82@	269.54	1.43
13040.00	90.50	266.86	8753.77	31.00	4412.76	36.64 S	4412.64 W	33.00022153 N	103.83313922 W	4412.79@	269.52	1.63
13072.00	90.78	266.43	8753.41	32.00	4444.71	38.51 S	4444.58 W	33.00021680 N	103.83324343 W	4444.75@	269.50	1.60
13104.00	90.11	265.93	8753.17	32.00	4476.65	40.64 S	4476.51 W	33.00021136 N	103.83334760 W	4476.69@	269.48	2.61
13135.00	90.28	266.11	8753.06	31.00	4507.58	42.79 S	4507.43 W	33.00020585 N	103.83344850 W	4507.64@	269.46	0.80
13163.00	90.31	267.12	8752.92	28.00	4535.54	44.45 S	4535.38 W	33.00020167 N	103.83353969 W	4535.60@	269.44	3.61
STRAIGHT LINE PROJECTION TO BIT DEPTH AT 13256' MD.												
13256.00	90.31	267.12	8752.41	93.00	4628.44	49.12 S	4628.26 W	33.00019004 N	103.83384271 W	4628.52@	269.39	0.00

** The survey data at tie-in point was furnished by a recognized survey company and entered as submitted. Survey stations above the tie-in point represent recalculated data by PathFinder Energy Services, Inc. and may reflect minor changes due to rounding differences between survey programs. Only survey stations taken by qualified PathFinder personnel are subject to certification.