

PATRIOT DRILLING, LLC

OPERATOR: COG Operating, LLC
WELL/LEASE: Scooter Fed Com 2H
COUNTY: Lea Co., New Mexico
Sec. 23, T 18S, R 33E

**STATE OF NEW MEXICO
DEVIATION REPORT**

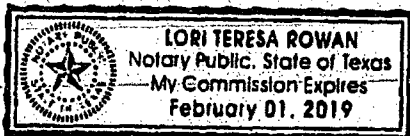
<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>
550	4 1/2	5,345	2 1/2
986	3/4	5,935	1 1/4
1,302	1/2	6,438	1 1/2
1,831	1/2	6,906	3/4
2,305	1/2	7,392	2
2,776	1	7,711	2 1/2
3,512	1 1/2	8,143	1
3,986	1 1/4	8,521	1 3/4
4,395	1	8,973	1
4,866	3/4		

Patriot Drilling, LLC

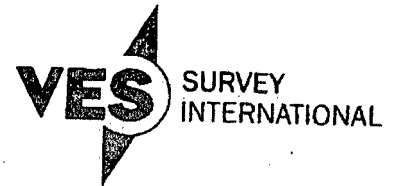
M. Leroy Peterson, Executive Vice-President

The foregoing instrument was acknowledged before me on this 21st day of October 2015 by M. Leroy Peterson, Executive Vice-President of Patriot Drilling, LLC.

My Commission Expires: 02/01/2019



Lori T. Rowan
Notary Public for Ector Co., Texas



October 14, 2015

Concho Resources, Inc.
One Concho Center
600 W. Illinois Avenue
Midland, Texas 79701

Attn: Kanicia Castillo

RE: Scooter Federal Com No 002H

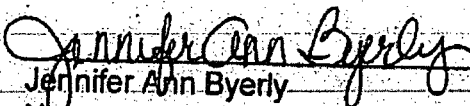
Please find enclosed a copy of the survey from 0' to 8939' ran on the above referenced well.

Sincerely,

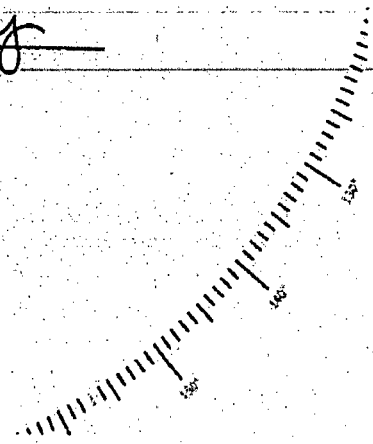
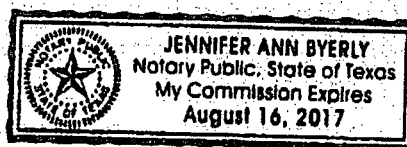
Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 14 day of October, A.D., 2015, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas

VES Survey International
P.O. Box 261021, Corpus Christi, Texas 78426
T (361) 767-0602 F (361) 767-0612
www.vessurvey.com





Company: Concho
Lease/Well: Scooter Federal Com No/002H

Rig Name: Patriot 6

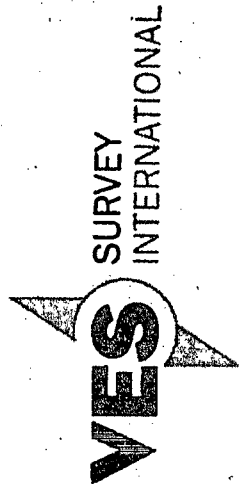
State/County: New Mexico/Lea

VS-Azi: 0.00 Degrees

Latitude: 32.73975, Longitude: -103.63648

Grid North = True North -0.38 degs (NAD 27)

Grid Correction Applied = -0.38 degs



Depth Reference : RKB = 18 feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut

Minimum Curvature Method

Report Date/Time: 10/14/2015 / 08:14

VES Survey International

Midland, Texas

432-563-5444

Surveyor: Adam Askew

Scooter Federal Com No 002H / API 30-025-42788

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	----
100.00	0.50	94.49	100.00	-0.03	0.44	-0.03	0.44	94.49	0.50
200.00	1.40	94.40	199.98	-0.16	2.09	-0.16	2.10	94.44	0.90
300.00	2.51	101.06	299.92	-0.68	5.46	-0.68	5.50	97.06	1.13
400.00	4.98	100.49	398.70	-1.89	11.88	-1.89	12.03	99.03	2.48
500.00	5.00	108.00	498.32	-4.03	20.30	-4.03	20.70	101.22	0.65
600.00	4.11	106.29	599.01	-6.38	27.89	-6.38	28.61	102.88	0.91
700.00	3.80	117.14	698.77	-8.90	34.27	-8.90	36.41	104.55	0.81
800.00	1.60	125.22	798.65	-11.21	38.36	-11.21	39.97	106.29	2.23
900.00	0.61	132.71	898.63	-12.38	39.89	-12.38	41.77	107.24	0.99
1000.00	0.42	179.97	998.63	-13.11	40.29	-13.11	42.37	108.02	0.45
1100.00	0.39	207.67	1098.63	-13.78	40.13	-13.78	42.43	108.95	0.20
1200.00	0.46	191.95	1198.62	-14.48	39.89	-14.48	42.43	109.95	0.13
1300.00	0.15	125.80	1298.62	-14.95	39.91	-14.95	42.62	110.53	0.42
1400.00	0.23	248.99	1398.62	-15.10	39.83	-15.10	42.69	110.76	0.33
1500.00	0.15	305.08	1498.62	-15.09	39.53	-15.09	42.32	110.89	0.19
1600.00	0.12	284.11	1598.62	-14.99	39.33	-14.99	42.09	110.85	0.06

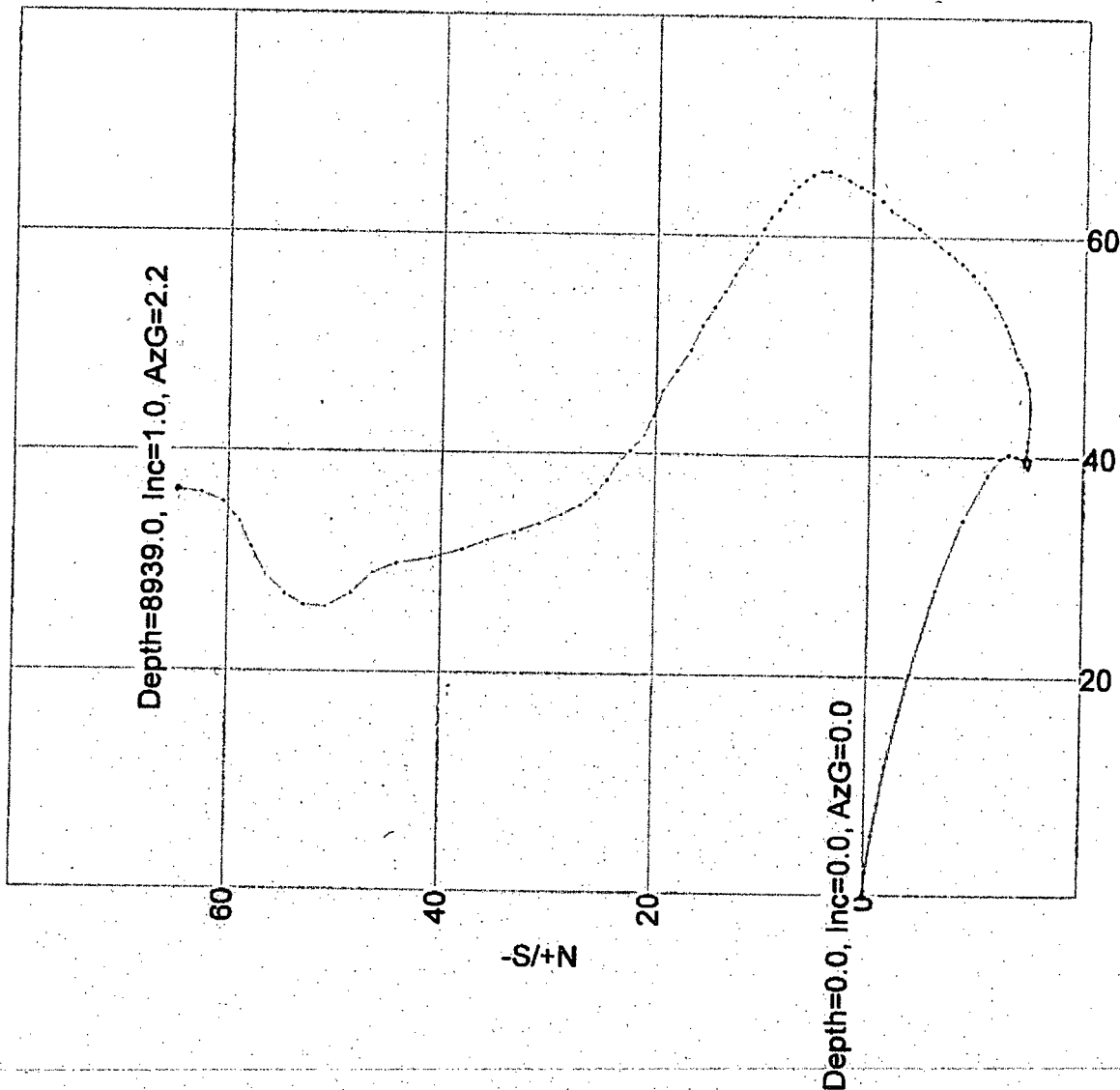
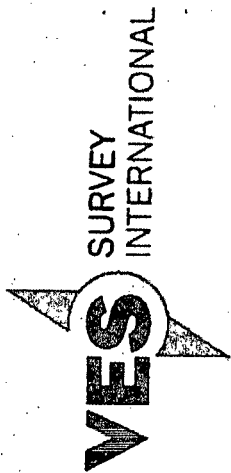
measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1700.00	0.15	310.40	1888.62	-14.88	39.13	-14.88	41.86	110.82	0.07
1800.00	0.13	173.95	1788.62	-14.91	39.05	-14.91	41.79	110.90	0.25
1900.00	0.18	25.16	1888.62	-14.88	39.12	-14.88	41.86	110.82	0.29
2000.00	0.18	40.63	1988.62	-14.82	38.29	-14.82	41.92	110.41	0.05
2100.00	0.30	106.32	2088.62	-14.58	39.64	-14.58	42.23	110.19	0.28
2200.00	0.30	104.75	2188.62	-14.72	40.14	-14.72	42.76	110.13	0.01
2300.00	0.35	91.47	2288.62	-14.79	40.71	-14.79	43.31	109.97	0.09
2400.00	0.60	93.22	2388.61	-14.83	41.54	-14.83	44.11	109.65	0.25
2500.00	0.84	100.90	2488.61	-15.00	42.79	-15.00	45.34	109.32	0.26
2600.00	1.14	83.38	2588.59	-15.02	44.49	-15.02	46.96	108.66	0.42
2700.00	0.93	91.48	2688.57	-14.93	46.29	-14.93	48.64	107.87	0.25
2800.00	0.86	57.65	2788.56	-14.55	47.74	-14.55	49.91	106.95	0.53
2900.00	0.89	64.71	2888.55	-13.82	49.07	-13.82	50.98	105.73	0.11
3000.00	0.92	75.57	2988.54	-13.29	50.54	-13.29	52.26	104.73	0.17
3100.00	1.01	64.01	3088.53	-12.70	52.12	-12.70	53.84	103.70	0.22
3200.00	1.27	60.93	3188.51	-11.78	53.88	-11.78	55.15	102.33	0.26
3300.00	1.00	46.60	3288.49	-10.86	55.50	-10.86	56.62	100.87	0.36
3400.00	0.82	43.69	3388.47	-9.56	56.65	-9.56	57.46	99.58	0.19
3500.00	0.86	41.71	3488.46	-8.48	57.65	-8.48	58.27	98.37	0.05
3600.00	0.97	33.79	3588.45	-7.22	58.62	-7.22	59.06	97.02	0.16
3700.00	1.05	40.93	3688.43	-5.83	59.69	-5.83	59.97	95.68	0.15
3800.00	1.03	34.96	3788.42	-4.40	60.80	-4.40	60.96	94.14	0.11
3900.00	0.94	26.69	3888.40	-2.94	61.68	-2.94	61.75	92.73	0.17
4000.00	0.68	43.48	3988.39	-1.77	62.46	-1.77	62.48	91.63	0.34
4100.00	0.63	46.30	4088.39	-0.96	63.27	-0.96	63.28	90.87	0.06
4200.00	0.69	28.88	4188.38	-0.04	63.94	-0.04	63.94	90.03	0.23
4300.00	0.76	25.70	4288.37	1.09	64.50	1.09	64.51	89.03	0.07
4400.00	0.68	30.42	4388.36	2.20	65.09	2.20	65.13	88.06	0.10
4500.00	0.58	22.82	4488.36	3.18	65.59	3.18	65.66	87.23	0.13
4600.00	0.46	18.52	4588.35	4.02	65.91	4.02	66.03	86.51	0.13
4700.00	0.48	346.21	4688.35	4.79	65.93	4.79	66.11	85.85	0.26
4800.00	0.57	327.48	4788.35	5.60	65.56	5.60	65.80	85.12	0.19
4900.00	0.44	324.56	4888.34	6.33	65.07	6.33	65.38	84.45	0.13
5000.00	0.57	316.06	4988.34	6.99	64.51	6.99	64.89	83.81	0.15
5100.00	0.52	317.12	5088.33	7.68	63.86	7.68	64.32	83.14	0.05
5200.00	0.52	297.14	5188.33	8.22	63.15	8.22	63.68	82.58	0.18
5300.00	0.54	315.76	5288.33	8.76	62.42	8.76	63.03	82.01	0.17
5400.00	0.65	312.31	5388.32	9.49	61.67	9.49	62.39	81.25	0.11
5500.00	0.78	292.97	5488.31	10.13	60.62	10.13	61.46	80.51	0.27

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/S FT	+E/W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5600.00	0.93	300.12	5998.30	10.81	59.29	10.81	60.27	79.67	0.18
5700.00	1.03	310.66	5998.29	11.80	57.91	11.80	59.10	78.48	0.21
5800.00	1.01	295.09	5798.27	12.76	56.43	12.76	57.85	77.28	0.28
5900.00	1.07	306.67	5898.28	13.69	54.88	13.69	58.55	75.99	0.22
6000.00	0.94	299.92	5998.24	14.66	53.43	14.66	55.40	74.66	0.18
6100.00	1.36	304.90	6098.22	15.74	51.74	15.74	54.08	73.08	0.44
6200.00	1.49	287.40	6198.19	16.82	49.52	16.82	52.30	71.24	0.45
6300.00	1.28	322.67	6298.16	18.08	47.61	18.08	50.93	69.20	0.86
6400.00	1.45	289.55	6398.14	19.38	45.74	19.38	49.68	67.04	0.79
6500.00	1.29	291.18	6498.11	20.21	43.50	20.21	47.96	65.08	0.17
6600.00	1.06	301.78	6598.09	21.11	41.66	21.11	46.70	63.13	0.31
6700.00	1.09	323.28	6698.07	22.36	40.30	22.36	45.09	60.98	0.40
6800.00	0.99	305.71	6798.05	23.82	39.04	23.82	45.63	58.83	0.33
6900.00	0.97	299.15	6898.04	24.53	37.60	24.53	44.90	56.88	0.11
7000.00	0.86	322.22	6998.03	25.53	36.41	25.53	44.47	54.96	0.38
7100.00	1.21	323.73	7098.01	26.98	35.32	26.98	44.45	52.63	0.35
7200.00	1.11	345.88	7197.99	28.77	34.46	28.77	44.89	50.14	0.45
7300.00	1.43	331.42	7297.96	30.80	33.62	30.80	45.60	47.51	0.45
7400.00	1.46	349.03	7397.93	33.15	32.78	33.15	46.82	44.68	0.44
7500.00	1.46	337.91	7497.90	35.58	32.06	35.58	47.90	42.02	0.28
7600.00	1.45	342.17	7597.87	37.97	31.19	37.97	49.14	39.40	0.11
7700.00	2.12	346.88	7697.82	40.98	30.38	40.98	51.01	36.55	0.69
7800.00	1.54	356.54	7797.77	44.12	29.87	44.12	53.28	34.10	0.66
7900.00	1.42	318.70	7897.74	46.40	28.97	46.40	54.70	31.98	0.97
8000.00	1.70	316.36	7997.70	48.40	27.13	48.40	55.49	29.28	0.29
8100.00	1.52	350.06	8097.68	50.78	25.88	50.78	57.00	27.01	0.95
8200.00	0.93	29.00	8197.64	52.80	26.05	52.80	58.87	26.26	0.99
8300.00	1.42	29.69	8297.62	54.58	27.05	54.58	60.92	26.36	0.49
8400.00	1.54	55.99	8397.59	58.41	28.78	56.41	63.33	27.03	0.68
8500.00	1.69	66.81	8497.55	57.74	31.25	57.74	65.65	28.42	0.34
8600.00	1.28	60.52	8597.51	58.87	33.57	58.87	67.77	29.69	0.44
8700.00	1.44	37.50	8697.49	60.42	35.31	60.42	69.98	30.30	0.57
8800.00	1.16	3.25	8797.46	62.43	36.13	62.43	72.13	30.06	0.81
8900.00	0.75	12.54	8897.45	64.08	36.33	64.08	73.66	29.55	0.43
8939.00	1.05	2.24	8936.44	64.68	36.40	64.68	74.22	29.37	0.86



VES Survey International
Midland, Texas
432-563-5444

Surveyor: Adam Askew
Scooter Federal Com No 002H / API 30-025-42788



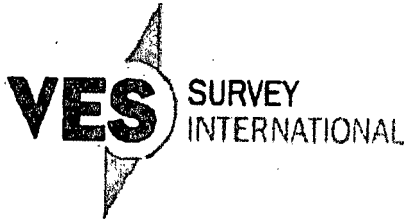
VES Survey Date: 10/8/2015



I Adam Askew certify that I am employed by Vaughn Energy Services. That I did on the day(s) of 10/08/15 through 10/08/15 conduct or supervise the taking of a HA Gyro survey from a depth of 0 feet to a depth of 8938 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Vaughn Energy Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of Concho for the Scooter Fed Com Well # 2H API # 30-025-42788 in Lea County / Parish New Mexico; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Vaughn Energy Services

A handwritten signature in black ink, appearing to be "Adam Askew", written over a horizontal line.

Adam Askew
Service Technician
Vaughn Energy Services



I Adam Askew certify that I am employed by Vaughn Energy Services. That I did on the day(s) of 10/08/15 through 10/08/15 conduct or supervise the taking of a HA Gyro survey from a depth of 0 feet to a depth of 8938 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Vaughn Energy Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of Concho for the Scooter Fed Com Well # 2H API # 30-025-42788 in Lea County / Parish New Mexico; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Vaughn Energy Services

A handwritten signature in black ink, appearing to read "Adam Askew", is written over a horizontal line.

Adam Askew
Service Technician
Vaughn Energy Services



COG Operating LLC

Lea County, NM (NAD27 NME)

Scooter Federal Com

#2H

OH

Design: OH

Survey Report - Geographic

20 October, 2015

Project	Lea County, NM (NAD27, NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Scooter Federal Com		
Site Position:		Northing:	633,537.40 usft
From:	Map	Easting:	714,269.40 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 44' 23.107 N
		Longitude:	103° 38' 11.344 W
		Grid Convergence:	0.38 °

Well	#2H		
Well Position	+N-S	0.0 usft	Northing: 633,537.40 usft
	+E-W	0.0 usft	Easting: 714,269.40 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 44' 23.107 N
		Longitude:	103° 38' 11.344 W
		Ground Level:	3,898.4 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	9/25/2015	(°)
			7.21
		Dip Angle	(°)
		60.55	
		Field Strength	(nT)
		48,413	

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
		Direction	(°)
		178.53	

Survey Program	Date: 10/20/2013		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.0	8,939.0 GYRO (OH)		NS-GYRO-MS
8,995.0	14,139.0 MWD (OH)		MWD
			North sensing gyrocompassing m/s
			MWD - Standard

Survey										
Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Map	Map	Latitude	Longitude	
Depth	(°)	(°)	Depth	(usft)	(usft)	Northing	Easting			
(usft)			(usft)			(usft)	(usft)			
0.0	0.00	0.00	0.0	0.0	0.0	633,537.40	714,269.40	32° 44' 23.107 N	103° 38' 11.344 W	
100.0	0.50	94.49	100.0	0.0	0.4	633,537.37	714,269.83	32° 44' 23.106 N	103° 38' 11.339 W	
200.0	1.40	94.40	200.0	-0.2	2.1	633,537.24	714,271.48	32° 44' 23.105 N	103° 38' 11.319 W	
300.0	2.51	101.06	299.9	-0.7	5.5	633,536.73	714,274.85	32° 44' 23.100 N	103° 38' 11.280 W	
400.0	4.99	100.49	399.7	-1.9	11.9	633,535.52	714,281.28	32° 44' 23.087 N	103° 38' 11.205 W	
500.0	5.00	108.00	499.3	-4.0	20.3	633,533.38	714,289.70	32° 44' 23.066 N	103° 38' 11.107 W	
600.0	4.11	106.29	599.0	-6.4	27.9	633,531.03	714,297.28	32° 44' 23.042 N	103° 38' 11.018 W	
700.0	3.80	117.14	698.8	-8.9	34.3	633,528.51	714,303.67	32° 44' 23.017 N	103° 38' 10.943 W	
800.0	1.60	125.22	798.7	-11.2	38.4	633,526.19	714,307.76	32° 44' 22.993 N	103° 38' 10.896 W	
900.0	0.61	132.71	898.6	-12.4	39.9	633,525.03	714,309.29	32° 44' 22.982 N	103° 38' 10.878 W	
1,000.0	0.42	179.97	998.6	-13.1	40.3	633,524.30	714,309.68	32° 44' 22.975 N	103° 38' 10.873 W	
1,100.0	0.39	207.67	1,098.6	-13.8	40.1	633,523.63	714,309.53	32° 44' 22.968 N	103° 38' 10.875 W	
1,200.0	0.46	191.96	1,198.6	-14.5	39.9	633,522.94	714,309.29	32° 44' 22.961 N	103° 38' 10.878 W	
1,300.0	0.15	126.80	1,298.6	-14.9	39.9	633,522.47	714,309.31	32° 44' 22.956 N	103° 38' 10.878 W	
1,400.0	0.23	248.99	1,398.6	-15.1	39.8	633,522.31	714,309.22	32° 44' 22.955 N	103° 38' 10.879 W	
1,500.0	0.15	305.08	1,498.6	-15.1	39.5	633,522.32	714,308.93	32° 44' 22.955 N	103° 38' 10.882 W	
1,600.0	0.12	284.11	1,598.6	-15.0	39.3	633,522.42	714,308.72	32° 44' 22.956 N	103° 38' 10.885 W	
1,700.0	0.15	310.40	1,698.6	-14.8	39.1	633,522.53	714,308.52	32° 44' 22.957 N	103° 38' 10.887 W	
1,800.0	0.13	173.95	1,798.6	-14.9	39.0	633,522.50	714,308.43	32° 44' 22.957 N	103° 38' 10.888 W	
1,900.0	0.18	25.16	1,898.6	-14.9	39.1	633,522.53	714,308.51	32° 44' 22.957 N	103° 38' 10.887 W	
2,000.0	0.18	40.53	1,998.6	-14.6	39.3	633,522.79	714,308.68	32° 44' 22.960 N	103° 38' 10.885 W	
2,100.0	0.30	106.32	2,098.6	-14.6	39.6	633,522.84	714,309.03	32° 44' 22.960 N	103° 38' 10.881 W	
2,200.0	0.30	104.75	2,198.6	-14.7	40.1	633,522.70	714,309.54	32° 44' 22.959 N	103° 38' 10.875 W	
2,300.0	0.35	91.47	2,298.6	-14.8	40.7	633,522.62	714,310.10	32° 44' 22.958 N	103° 38' 10.869 W	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
2,400.0	0.60	93.22	2,398.6	-14.8	41.5	633,522.59	714,310.92	32° 44' 22.958 N	103° 38' 10.859 W
2,500.0	0.84	100.90	2,498.6	-15.0	42.8	633,522.42	714,312.17	32° 44' 22.956 N	103° 38' 10.844 W
2,600.0	1.14	83.38	2,598.6	-15.0	44.5	633,522.39	714,313.87	32° 44' 22.955 N	103° 38' 10.824 W
2,700.0	0.93	91.48	2,698.6	-14.9	46.3	633,522.49	714,315.67	32° 44' 22.956 N	103° 38' 10.803 W
2,800.0	0.86	57.65	2,798.6	-14.5	47.7	633,522.87	714,317.12	32° 44' 22.960 N	103° 38' 10.786 W
2,900.0	0.89	64.71	2,898.6	-13.8	49.1	633,523.60	714,318.46	32° 44' 22.967 N	103° 38' 10.771 W
3,000.0	0.92	75.57	2,998.5	-13.3	50.5	633,524.13	714,319.94	32° 44' 22.972 N	103° 38' 10.753 W
3,100.0	1.01	64.01	3,098.5	-12.7	52.1	633,524.72	714,321.51	32° 44' 22.978 N	103° 38' 10.735 W
3,200.0	1.27	60.93	3,198.5	-11.8	53.9	633,525.64	714,323.27	32° 44' 22.987 N	103° 38' 10.714 W
3,300.0	1.00	48.60	3,298.5	-10.6	55.5	633,526.76	714,324.89	32° 44' 22.998 N	103° 38' 10.695 W
3,400.0	0.82	43.69	3,398.5	-9.5	56.6	633,527.85	714,326.04	32° 44' 23.009 N	103° 38' 10.682 W
3,500.0	0.86	41.71	3,498.5	-8.5	57.6	633,528.93	714,327.03	32° 44' 23.019 N	103° 38' 10.670 W
3,600.0	0.97	33.79	3,598.4	-7.2	58.6	633,530.20	714,328.00	32° 44' 23.032 N	103° 38' 10.658 W
3,700.0	1.05	40.93	3,698.4	-5.8	59.7	633,531.59	714,329.07	32° 44' 23.045 N	103° 38' 10.646 W
3,800.0	1.03	34.96	3,798.4	-4.4	60.8	633,533.02	714,330.19	32° 44' 23.060 N	103° 38' 10.633 W
3,900.0	0.94	26.69	3,898.4	-2.9	61.7	633,534.49	714,331.07	32° 44' 23.074 N	103° 38' 10.622 W
4,000.0	0.68	43.48	3,998.4	-1.8	62.5	633,535.65	714,331.85	32° 44' 23.085 N	103° 38' 10.613 W
4,100.0	0.63	46.30	4,098.4	-0.9	63.3	633,536.46	714,332.65	32° 44' 23.093 N	103° 38' 10.603 W
4,200.0	0.69	26.86	4,198.4	0.0	63.9	633,537.38	714,333.32	32° 44' 23.102 N	103° 38' 10.596 W
4,300.0	0.76	25.70	4,298.4	1.1	64.5	633,538.52	714,333.88	32° 44' 23.114 N	103° 38' 10.589 W
4,400.0	0.68	30.42	4,398.4	2.2	65.1	633,539.62	714,334.47	32° 44' 23.125 N	103° 38' 10.582 W
4,500.0	0.58	22.82	4,498.4	3.2	65.6	633,540.60	714,334.97	32° 44' 23.134 N	103° 38' 10.576 W
4,600.0	0.46	18.52	4,598.4	4.0	65.9	633,541.45	714,335.29	32° 44' 23.143 N	103° 38' 10.572 W
4,700.0	0.46	345.21	4,698.4	4.8	65.9	633,542.22	714,335.32	32° 44' 23.150 N	103° 38' 10.572 W
4,800.0	0.57	327.48	4,798.3	5.6	65.6	633,543.03	714,334.95	32° 44' 23.158 N	103° 38' 10.576 W
4,900.0	0.44	324.56	4,898.3	6.4	65.1	633,543.76	714,334.46	32° 44' 23.165 N	103° 38' 10.582 W
5,000.0	0.57	316.06	4,998.3	7.0	64.5	633,544.43	714,333.89	32° 44' 23.172 N	103° 38' 10.588 W
5,100.0	0.52	317.12	5,098.3	7.7	63.8	633,545.12	714,333.23	32° 44' 23.179 N	103° 38' 10.596 W
5,200.0	0.52	297.14	5,198.3	8.3	63.1	633,545.66	714,332.52	32° 44' 23.184 N	103° 38' 10.604 W
5,300.0	0.54	315.76	5,298.3	8.8	62.4	633,546.20	714,331.79	32° 44' 23.190 N	103° 38' 10.613 W
5,400.0	0.65	312.31	5,398.3	9.5	61.6	633,546.92	714,331.04	32° 44' 23.197 N	103° 38' 10.621 W
5,500.0	0.78	292.97	5,498.3	10.2	60.6	633,547.57	714,330.00	32° 44' 23.204 N	103° 38' 10.634 W
5,600.0	0.93	300.12	5,598.3	10.8	59.3	633,548.24	714,328.67	32° 44' 23.210 N	103° 38' 10.649 W
5,700.0	1.03	310.66	5,698.3	11.8	57.9	633,549.24	714,327.28	32° 44' 23.220 N	103° 38' 10.665 W
5,800.0	1.01	295.09	5,798.3	12.8	56.4	633,550.20	714,325.80	32° 44' 23.230 N	103° 38' 10.683 W
5,900.0	1.07	306.67	5,898.3	13.7	54.9	633,551.13	714,324.26	32° 44' 23.239 N	103° 38' 10.701 W
6,000.0	0.94	299.92	5,998.2	14.7	53.4	633,552.09	714,322.80	32° 44' 23.249 N	103° 38' 10.718 W
6,100.0	1.36	304.90	6,098.2	15.8	51.7	633,553.18	714,321.11	32° 44' 23.260 N	103° 38' 10.737 W
6,200.0	1.49	287.40	6,198.2	16.8	49.5	633,554.25	714,318.90	32° 44' 23.270 N	103° 38' 10.763 W
6,300.0	1.26	322.57	6,298.2	18.1	47.6	633,555.51	714,316.99	32° 44' 23.283 N	103° 38' 10.785 W
6,400.0	1.45	289.55	6,398.1	19.4	45.7	633,556.81	714,315.13	32° 44' 23.296 N	103° 38' 10.807 W
6,500.0	1.29	291.18	6,498.1	20.2	43.5	633,557.64	714,312.89	32° 44' 23.304 N	103° 38' 10.833 W
6,600.0	1.08	301.78	6,598.1	21.1	41.7	633,558.53	714,311.05	32° 44' 23.313 N	103° 38' 10.855 W
6,700.0	1.09	323.28	6,698.1	22.4	40.3	633,559.78	714,309.70	32° 44' 23.326 N	103° 38' 10.870 W
6,800.0	0.99	305.71	6,798.1	23.6	39.0	633,561.05	714,308.43	32° 44' 23.338 N	103° 38' 10.885 W
6,900.0	0.87	299.15	6,898.0	24.6	37.6	633,561.97	714,306.98	32° 44' 23.347 N	103° 38' 10.902 W
7,000.0	0.86	322.22	6,998.0	25.6	36.4	633,562.97	714,305.79	32° 44' 23.357 N	103° 38' 10.916 W
7,100.0	1.21	323.73	7,098.0	27.0	35.3	633,564.42	714,304.70	32° 44' 23.372 N	103° 38' 10.929 W
7,200.0	1.11	345.68	7,198.0	28.8	34.4	633,566.21	714,303.84	32° 44' 23.390 N	103° 38' 10.938 W
7,300.0	1.43	331.42	7,298.0	30.8	33.6	633,568.24	714,303.00	32° 44' 23.410 N	103° 38' 10.948 W
7,400.0	1.46	349.03	7,397.9	33.2	32.8	633,570.59	714,302.16	32° 44' 23.433 N	103° 38' 10.958 W
7,500.0	1.46	337.91	7,497.9	35.6	32.0	633,573.02	714,301.44	32° 44' 23.457 N	103° 38' 10.966 W
7,600.0	1.45	342.17	7,597.9	38.0	31.2	633,575.40	714,300.57	32° 44' 23.481 N	103° 38' 10.976 W
7,700.0	2.12	346.68	7,697.8	41.0	30.4	633,578.41	714,299.76	32° 44' 23.511 N	103° 38' 10.985 W
7,800.0	1.54	356.54	7,797.8	44.1	29.9	633,581.55	714,299.25	32° 44' 23.542 N	103° 38' 10.991 W
7,900.0	1.42	318.70	7,897.7	46.4	29.0	633,583.82	714,298.35	32° 44' 23.564 N	103° 38' 11.001 W
8,000.0	1.70	316.36	7,997.7	48.4	27.1	633,585.82	714,296.51	32° 44' 23.584 N	103° 38' 11.023 W
8,100.0	1.52	350.06	8,097.7	50.8	25.9	633,588.20	714,295.26	32° 44' 23.608 N	103° 38' 11.037 W
8,200.0	0.93	29.00	8,197.6	52.8	26.0	633,590.22	714,295.42	32° 44' 23.628 N	103° 38' 11.035 W
8,300.0	1.42	29.69	8,297.6	54.6	27.0	633,592.01	714,296.43	32° 44' 23.645 N	103° 38' 11.023 W
8,400.0	1.54	55.99	8,397.6	56.4	28.8	633,593.83	714,298.16	32° 44' 23.663 N	103° 38' 11.003 W
8,500.0	1.69	66.81	8,497.5	57.8	31.2	633,595.17	714,300.83	32° 44' 23.676 N	103° 38' 10.974 W
8,600.0	1.28	60.52	8,597.5	58.9	33.6	633,596.30	714,302.96	32° 44' 23.687 N	103° 38' 10.946 W
8,700.0	1.44	37.50	8,697.5	60.4	35.3	633,597.84	714,304.69	32° 44' 23.703 N	103° 38' 10.926 W
8,800.0	1.16	3.25	8,797.5	62.4	36.1	633,599.85	714,305.52	32° 44' 23.722 N	103° 38' 10.916 W
8,900.0	0.75	12.54	8,897.4	64.1	36.3	633,601.50	714,305.71	32° 44' 23.739 N	103° 38' 10.914 W
8,939.0	1.05	2.24	8,936.4	64.7	36.4	633,602.11	714,305.78	32° 44' 23.745 N	103° 38' 10.913 W

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,995.0	0.90	12.90	8,992.4	65.6	36.5	633,603.05	714,305.90	32° 44' 23.754 N	103° 38' 10.911 W
9,027.0	0.50	286.50	9,024.4	65.9	36.4	633,603.33	714,305.82	32° 44' 23.757 N	103° 38' 10.912 W
KOP @ 9027 MD, 9024.4 TVD									
9,058.0	3.50	204.10	9,055.4	65.1	35.9	633,602.51	714,305.31	32° 44' 23.749 N	103° 38' 10.918 W
9,090.0	7.40	196.20	9,087.3	62.2	34.9	633,599.84	714,304.33	32° 44' 23.720 N	103° 38' 10.930 W
9,122.0	11.40	192.00	9,118.8	57.2	33.7	633,594.56	714,303.10	32° 44' 23.670 N	103° 38' 10.945 W
9,153.0	15.90	191.30	9,148.9	50.0	32.2	633,587.40	714,301.63	32° 44' 23.599 N	103° 38' 10.963 W
9,185.0	20.10	189.80	9,179.4	40.3	30.4	633,577.68	714,299.84	32° 44' 23.503 N	103° 38' 10.984 W
9,217.0	24.50	188.80	9,209.0	28.3	28.7	633,565.86	714,298.11	32° 44' 23.385 N	103° 38' 11.006 W
9,248.0	28.70	183.50	9,236.7	14.4	27.5	633,551.84	714,296.90	32° 44' 23.248 N	103° 38' 11.021 W
9,280.0	31.80	180.40	9,264.3	-1.7	27.0	633,535.74	714,296.37	32° 44' 23.089 N	103° 38' 11.028 W
9,311.0	34.50	179.60	9,290.3	-18.6	27.0	633,518.79	714,296.37	32° 44' 22.921 N	103° 38' 11.030 W
9,343.0	37.80	179.40	9,316.1	-37.5	27.1	633,499.91	714,296.54	32° 44' 22.734 N	103° 38' 11.029 W
9,375.0	40.30	179.10	9,341.0	-57.6	27.4	633,479.76	714,296.80	32° 44' 22.535 N	103° 38' 11.027 W
9,406.0	42.60	178.30	9,364.2	-78.2	27.9	633,459.24	714,297.27	32° 44' 22.332 N	103° 38' 11.024 W
9,438.0	45.80	177.80	9,387.1	-100.5	28.6	633,436.95	714,298.04	32° 44' 22.111 N	103° 38' 11.016 W
9,470.0	49.10	178.00	9,408.8	-124.0	29.5	633,413.40	714,298.90	32° 44' 21.878 N	103° 38' 11.008 W
9,490.4	51.01	177.60	9,421.9	-139.6	30.1	633,397.77	714,299.50	32° 44' 21.723 N	103° 38' 11.002 W
Cross into 330' Lease @ 9490.4 MD									
9,501.0	52.00	177.40	9,428.5	-147.9	30.5	633,389.48	714,299.86	32° 44' 21.641 N	103° 38' 10.999 W
9,533.0	54.70	177.50	9,447.6	-173.6	31.6	633,363.83	714,301.00	32° 44' 21.387 N	103° 38' 10.987 W
9,563.0	57.50	176.70	9,464.3	-198.4	32.9	633,338.97	714,302.27	32° 44' 21.141 N	103° 38' 10.974 W
9,595.0	58.90	176.60	9,481.2	-225.6	34.5	633,311.82	714,303.85	32° 44' 20.872 N	103° 38' 10.958 W
9,627.0	61.10	176.70	9,497.2	-253.2	36.1	633,284.16	714,305.47	32° 44' 20.599 N	103° 38' 10.941 W
9,659.0	64.40	177.40	9,511.8	-281.7	37.5	633,255.75	714,306.94	32° 44' 20.317 N	103° 38' 10.926 W
9,690.0	68.30	177.30	9,524.2	-310.0	38.9	633,227.39	714,308.25	32° 44' 20.037 N	103° 38' 10.913 W
9,722.0	71.00	178.00	9,535.4	-340.0	40.1	633,197.41	714,309.48	32° 44' 19.740 N	103° 38' 10.901 W
9,754.0	75.10	177.70	9,544.7	-370.6	41.2	633,166.83	714,310.63	32° 44' 19.437 N	103° 38' 10.890 W
9,785.0	79.30	177.80	9,551.6	-400.8	42.4	633,136.83	714,311.81	32° 44' 19.138 N	103° 38' 10.878 W
9,789.8	80.00	177.83	9,552.4	-405.5	42.6	633,131.91	714,311.99	32° 44' 19.092 N	103° 38' 10.876 W
60° @ 9789.8 MD, 9562.4 TVD									
9,816.0	83.80	178.00	9,556.1	-431.4	43.5	633,106.00	714,312.94	32° 44' 18.835 N	103° 38' 10.867 W
9,880.0	88.80	179.00	9,560.2	-495.2	45.2	633,042.17	714,314.60	32° 44' 18.204 N	103° 38' 10.853 W
9,975.0	91.20	179.30	9,560.2	-590.2	46.6	632,947.19	714,316.01	32° 44' 17.264 N	103° 38' 10.844 W
10,038.0	90.70	179.00	9,559.2	-653.2	47.6	632,884.21	714,316.95	32° 44' 16.640 N	103° 38' 10.838 W
10,101.0	89.30	177.70	9,559.2	-716.2	49.4	632,821.24	714,318.76	32° 44' 16.017 N	103° 38' 10.821 W
10,196.0	88.50	176.60	9,561.0	-811.0	54.1	632,726.37	714,323.48	32° 44' 15.078 N	103° 38' 10.773 W
10,292.0	87.20	177.60	9,564.6	-906.8	58.9	632,630.57	714,328.34	32° 44' 14.130 N	103° 38' 10.724 W
10,387.0	87.00	177.50	9,569.4	-1,001.6	63.0	632,535.78	714,332.39	32° 44' 13.192 N	103° 38' 10.684 W
10,482.0	87.40	176.90	9,574.1	-1,096.4	67.6	632,441.00	714,337.03	32° 44' 12.254 N	103° 38' 10.637 W
10,577.0	87.40	178.70	9,578.4	-1,191.2	71.3	632,346.17	714,340.67	32° 44' 11.315 N	103° 38' 10.601 W
10,672.0	87.70	178.00	9,582.4	-1,286.1	74.0	632,251.30	714,343.41	32° 44' 10.378 N	103° 38' 10.577 W
10,767.0	86.90	179.70	9,586.9	-1,381.0	75.9	632,156.43	714,345.31	32° 44' 9.437 N	103° 38' 10.562 W
10,862.0	87.30	179.10	9,591.7	-1,475.8	76.9	632,061.56	714,346.30	32° 44' 8.499 N	103° 38' 10.557 W
10,957.0	87.60	179.00	9,596.0	-1,570.7	78.5	631,966.67	714,347.88	32° 44' 7.560 N	103° 38' 10.546 W
11,052.0	88.00	178.70	9,599.6	-1,665.6	80.4	631,871.75	714,349.78	32° 44' 6.620 N	103° 38' 10.531 W
11,147.0	86.20	178.40	9,604.4	-1,760.5	82.8	631,776.91	714,352.18	32° 44' 5.682 N	103° 38' 10.510 W
11,242.0	86.80	177.40	9,610.2	-1,855.3	86.3	631,682.15	714,355.66	32° 44' 4.744 N	103° 38' 10.477 W
11,337.0	85.50	178.30	9,616.6	-1,950.0	89.8	631,587.44	714,359.21	32° 44' 3.806 N	103° 38' 10.443 W
11,432.0	85.50	179.10	9,624.0	-2,044.6	92.0	631,492.76	714,361.36	32° 44' 2.869 N	103° 38' 10.425 W
11,527.0	87.60	179.00	9,629.8	-2,139.5	93.5	631,397.95	714,362.94	32° 44' 1.931 N	103° 38' 10.414 W
11,622.0	87.70	178.00	9,633.7	-2,234.3	96.0	631,303.06	714,365.42	32° 44' 0.992 N	103° 38' 10.392 W
11,717.0	87.70	179.40	9,637.5	-2,329.2	98.2	631,208.16	714,367.57	32° 44' 0.053 N	103° 38' 10.374 W
11,812.0	88.70	179.80	9,640.4	-2,424.2	98.8	631,113.21	714,368.24	32° 43' 59.113 N	103° 38' 10.374 W
11,907.0	88.90	179.10	9,642.4	-2,519.2	99.8	631,018.24	714,369.15	32° 43' 58.174 N	103° 38' 10.370 W
12,002.0	89.20	178.00	9,644.0	-2,614.1	102.2	630,923.28	714,371.55	32° 43' 57.234 N	103° 38' 10.349 W
12,097.0	88.50	179.60	9,645.9	-2,709.1	104.1	630,828.33	714,373.54	32° 43' 56.294 N	103° 38' 10.333 W
12,192.0	88.70	178.80	9,648.2	-2,804.0	105.5	630,733.37	714,374.87	32° 43' 55.354 N	103° 38' 10.325 W
12,287.0	89.30	178.30	9,649.9	-2,899.0	107.9	630,638.41	714,377.27	32° 43' 54.415 N	103° 38' 10.304 W
12,382.0	90.20	179.00	9,650.3	-2,994.0	109.4	630,543.43	714,378.76	32° 43' 53.475 N	103° 38' 10.294 W
12,508.0	88.90	179.00	9,651.3	-3,120.0	110.6	630,447.44	714,379.97	32° 43' 52.228 N	103° 38' 10.290 W
12,603.0	88.50	180.20	9,653.5	-3,214.9	111.2	630,322.47	714,380.64	32° 43' 51.288 N	103° 38' 10.289 W
12,698.0	89.20	179.90	9,655.4	-3,309.9	111.2	630,227.49	714,380.55	32° 43' 50.349 N	103° 38' 10.298 W
12,793.0	87.90	179.70	9,657.8	-3,404.9	111.5	630,132.52	714,380.88	32° 43' 49.409 N	103° 38' 10.301 W
12,888.0	88.50	179.40	9,660.8	-3,499.8	112.2	630,037.57	714,381.63	32° 43' 48.469 N	103° 38' 10.300 W
12,983.0	88.90	179.40	9,662.9	-3,594.8	113.2	629,942.60	714,382.62	32° 43' 47.530 N	103° 38' 10.295 W
13,458.0	89.20	179.40	9,670.8	-4,069.7	118.2	629,467.70	714,387.60	32° 43' 42.830 N	103° 38' 10.274 W

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
13,934.0	88.40	178.70	9,680.6	-4,545.5	126.1	628,991.87	714,395.49	32° 43' 38.121 N	103° 38' 10.218 W
14,088.0	89.70	178.20	9,683.3	-4,699.4	130.3	628,837.95	714,399.65	32° 43' 36.598 N	103° 38' 10.181 W
14,139.0	89.70	178.20	9,683.6	-4,750.4	131.9	628,786.98	714,401.25	32° 43' 36.094 N	103° 38' 10.166 W
TD @ 14139 MD, 9683.6 TVD, -4750.4 N, 131.9 E, 4752.2 VS									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		
		+N-S (usft)	+E-W (usft)	Comment
9,027.0	9,024.4	65.9	36.4	KOP @ 9027 MD, 9024.4 TVD
9,490.4	9,421.9	-139.6	30.1	Cross into 330' Lease @ 9490.4 MD
9,789.8	9,552.4	-405.5	42.6	80' @ 9789.8 MD, 9552.4 TVD
14,139.0	9,683.6	-4,750.4	131.9	TD @ 14139 MD, 9683.6 TVD, -4750.4 N, 131.9 E, 4752.2 VS

Checked By: _____ Approved By: _____ Date: _____

[illegible]

Section Details

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	Vsect
1	839.0	1.05	2.24	8924.4	64.7	35.4	0.00	0.00	-43.7
2	907.2	1.05	2.24	9049.9	57.1	35.5	0.00	0.00	-46.2
E) 3	8815.9	89.14	178.99	9556.0	-394.4	45.1	12.00	178.75	395.6
4	14168.0	89.14	178.99	9697.9	-4760.9	122.1	0.00	0.00	4782.5

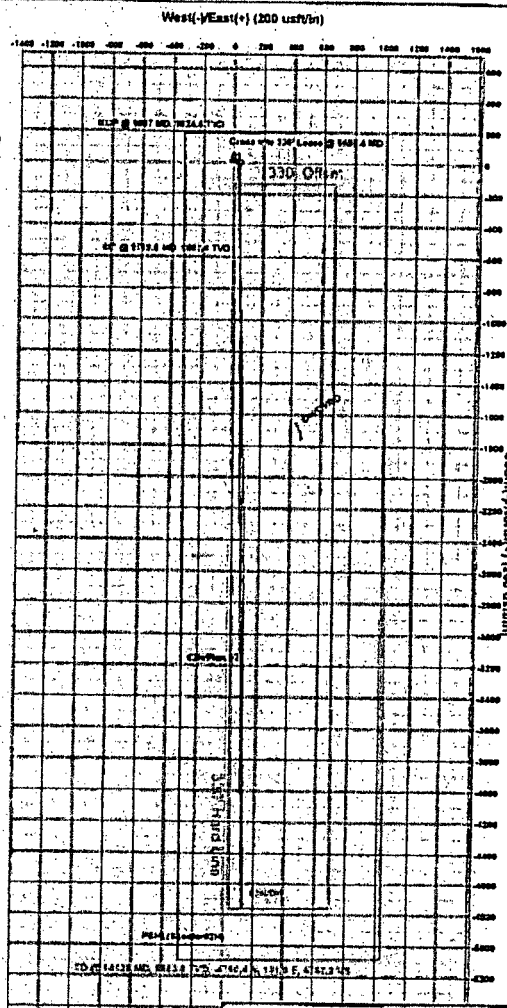
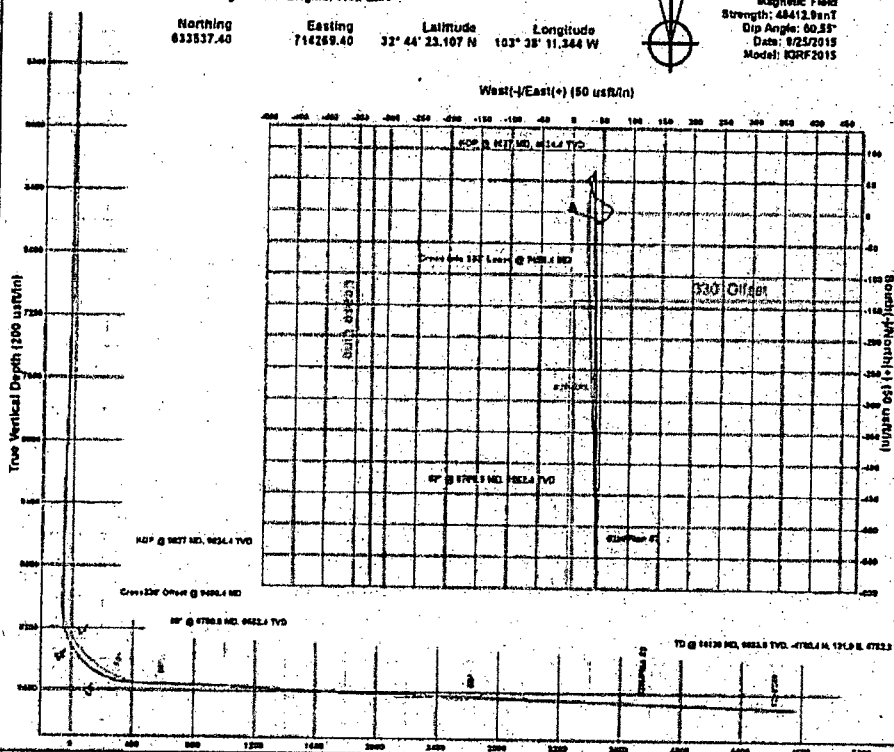
WELL DETAILS: #2H

Ground Elevation: 3898.4
RKB Elevation: WELL @ 3916.4usft (Original Well Elev)
Rig Name: Original Well Elev

Northing	Easting	Latitude	Longitude
632537.40	714259.40	32° 44' 23.107 N	103° 35' 11.344 W



Aziimuths to Grid North
True North: -0.38°
Magnetic North: 0.93°
Magnetic Field
Strength: 48412.9nT
Dip Angle: 60.55°
Date: 8/25/2015
Model: BRF2015



NEXUS
DIRECTIONAL SOLUTIONS, L.P.

Vertical Section at 175.53' (200 yd/in)

Nexus Directional Solutions

PROPERTY DETAILS: ASA COUNTY, NEW MEXICO
Geodetic System: US 81296 Plane 1377 (Exact unknown)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3601
System Datum: Mean Sea Level
Local North: Grid