Results of Directional Survey

API number:	30-025-41212				
OGRID:		Operator:	EOG RESOURCES INC		
		Property:	WHIRLING WIND 14 FEDERAL COM		# 1H

surface	ULSTR:	A	14	T	26S	R	33E
				150	FNL	170	FEL
BH Loc	ULSTR:	I	02	T	26S	R	33E
17190	MD	9512.8	TVD	2406	FSL	455	FEL
				7686	FSL		
Top Perf/OH	ULSTR:	A	14	T	26S	R	33E
9849	MD	9567.4	TVD	348	FSL	411	FEL
Bot Perf/OH	ULSTR:	I	02	T	26S	R	33E
17070	MD	9514.4	TVD	2286	FSL	459	FEL
				7566	FSL		

	MD	N/S	E/W	VD
	9848	497.12	-240.50	9567.23
TOP PERFS/OH	**9849**	498.10	-240.61	9567.40
	9879	527.50	-243.87	9572.39
	17001	7647.09	-290.68	9515.34
BOT PERFS/OH	**17070**	7716.05	-288.72	9514.44
	17096	7742.04	-287.98	9514.10

NEXT TO LAST	17148	7794.00	-286.22	9513.34
LAST READING	17190	7835.98	-284.80	9512.79
TD	**17190**	7835.98	-284.80	9512.79

Surface Location	150	FN	170	FE
Projected BHL	7686	FS	455	FE
Location of				
Top Perfs/OH	348	FS	411	FE
Bottom Perfs/OH	7566	FS	459	FE

SUMMARY of Subsurface Locations

Surface Location	A-14-26S-33E	150	FN	170	FE	Vert. Depth
Top Perfs/OH	A-14-26S-33E	348	FS	411	FE	9567.40
Bottom Perfs/OH	I-02-26S-33E	7566	FS	459	FE	9514.44
Projected TD	I-02-26S-33E	7686	FS	455	FE	9512.79

MAR 18 2014

OCD/RBDMS TEST 3/17/14

eog resources

Cactus 123

Eog Resources

FINAL PvA

PATHFINDER
A Schlumberger Company

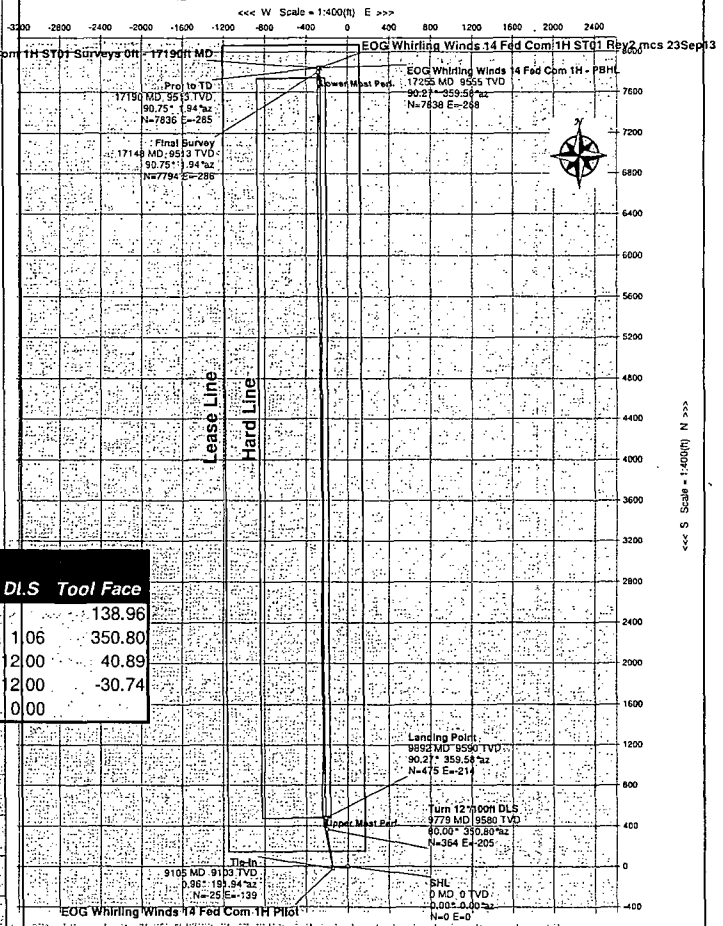
WELL	FIELD	STRUCTURE
Whirling Winds 14 Fed Com 1H	Lea County, NM (NAD 27)	Cactus 123

Magnetic Parameters				Surface Location			NAD27 New Mexico State Plane, Eastern Zone, US Feet			Miscellaneous			
Model:	BGGM 2012	Dip:	59.926°	Lat:	N 32 3 0.619	Northing:	382893.00 ftUS	Grid Conv:	0.424°	Slot:	Whirling Winds 14 Fed Com 1H	TVD Ref.	RKB(3367ft above)
		Mag Dec:	7.343°	Lon:	W 103 32 4.824	Easting:	747449.00 ftUS	Scale Fact:	0.99997922	Plan:	ST01 Rev2 mcs 23Sep13	Srvy Date:	September 23, 2013
		Date:	September 23, 2013										
		FS:	48251 nT										

Legend

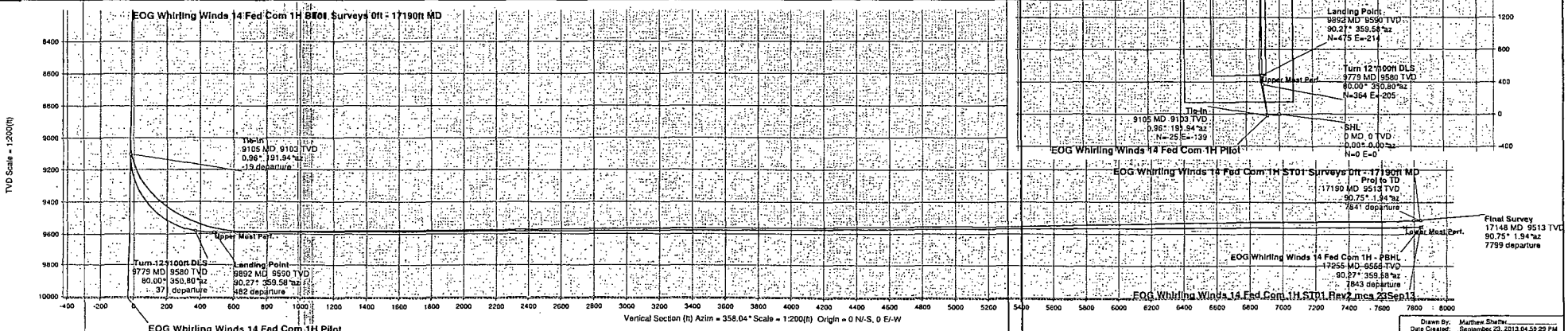
- EOG Whirling Winds 14 Fed Com 1H - Lower Most Perf.
- EOG Whirling Winds 14 Fed Com 1H - Landing
- EOG Whirling Winds 14 Fed Com 1H - 330ft Hard Line
- EOG Whirling Winds 14 Fed Com 1H - PBHL
- EOG Whirling Winds 14 Fed Com 1H - Upper Most Perf.
- EOG Whirling Winds 14 Fed Com 1H ST01 Rev2 mcs 23Sep13
- EOG Whirling Winds 14 Fed Com 1H Pilot Surveys Surface to Upper
- EOG Whirling Winds 14 Fed Com 1H ST01 Surveys Landing - Upper
- EOG Whirling Winds 14 Fed Com 1H ST01 Surveys Off - 17190ft MD

Grid North
Tot Corr (M->G 6.9592°)
Mag Dec (7.383°)
Grid Conv (0.424°)



Critical Points

Comments	Survey MD	Inc	Azim	TVD	SSTVD	VS	NS	EW	Longitude	Latitude	Easting	Northing	DLS	Tool Face
SHL	0.00	0.00	0.00	0.00	-3367.00	0.00	0.00	0.00	N 32 3 0.619	W 103 32 4.824	747449.00	382893.00		138.96
Tie-In	9105.15	0.96	191.94	9102.77	5735.77	-20.50	-25.26	-139.04	N 32 3 0.379	W 103 32 6.441	747309.96	382867.74	1.06	350.80
Turn 12°/100ft DLS	9779.31	80.00	350.80	9580.47	6213.47	370.54	363.77	-204.55	N 32 3 4.233	W 103 32 7.169	747244.45	383256.76	12.00	40.89
Landing Point	9891.67	90.27	359.58	9590.00	6223.00	482.10	475.07	-213.85	N 32 3 5.335	W 103 32 7.267	747235.15	383368.06	12.00	-30.74
PBHL	17255.05	90.27	359.58	9555.00	6188.00	7842.76	7838.18	-268.01	N 32 4 18.201	W 103 32 7.264	747181.00	390731.00	0.00	



Drawn By:	Matthew Shaffer
Date Created:	September 23, 2013 04:59:29 PM
Checked By:	
Checked Date:	
Approved By:	
Approved Date:	

eog resources

Cactus 123

Eog Resources

PATHFINDER
A Schlumberger Company

FINAL PvA

WELL	Whirling Winds 14 Fed Com 1H	FIELD	Lea County, NM (NAD 27)
STRUCTURE	Cactus 123		

Magnetic Parameters: Model: BGGM 2012 | Dip: 59.926° | Mag Dec: 7.383° | Date: September 23, 2013 | FS: 49251 nnT

Surface Location: NAD27 New Mexico State Plane, Eastern Zone, US Feet
Lat: N 32 3 0.619 | Lon: W 103 32 4.824 | Northing: 382893.00 ftUS | Easting: 747449.00 ftUS | Grid Conv: 0.424° | Scale Fact: 0.99997922

Miscellaneous: Slot: Whirling Winds 14 Fed Com 1H | Plan: ST01 Rev2 mcs 23Sep13 | TVD Ref: RKB(3367ft above) | Srvy Date: September 23, 2013

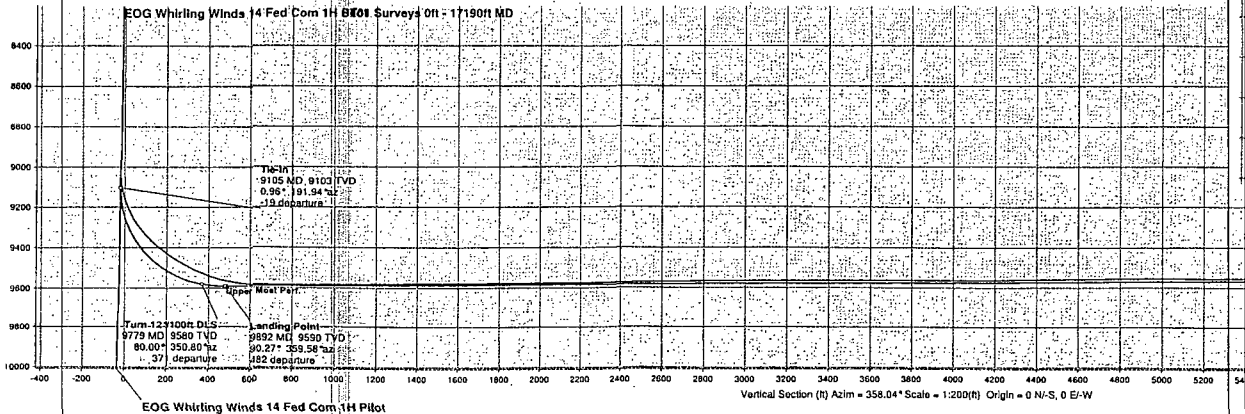
Legend

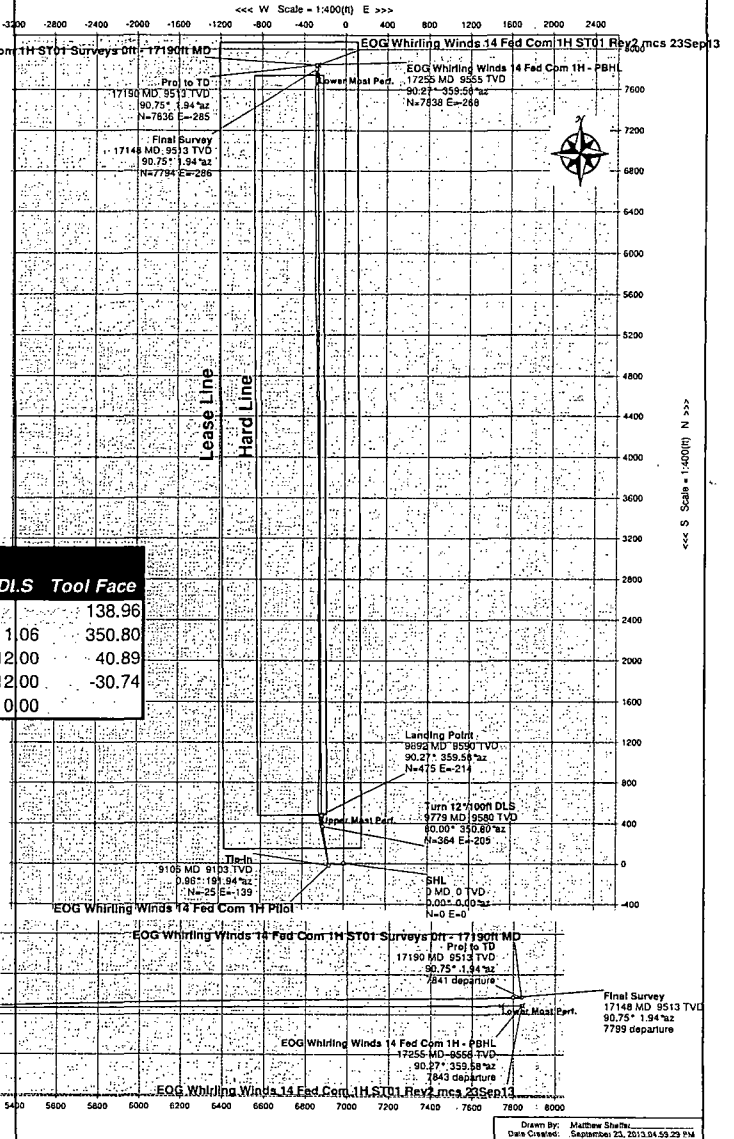
EOG Whirling Winds 14 Fed Com 1H, Lower Most Perf,
EOG Whirling Winds 14 Fed Com 1H, Landing
EOG Whirling Winds 14 Fed Com 1H, Hard Line
EOG Whirling Winds 14 Fed Com 1H, PBHL
EOG Whirling Winds 14 Fed Com 1H, Upper Most Perf,
EOG Whirling Winds 14 Fed Com 1H ST01 Rev2 mcs 23Sep13
EOG Whirling Winds 14 Fed Com 1H Plot Surveys Surface to Uppe
EOG Whirling Winds 14 Fed Com 1H ST01 Surveys Tie-In - Uppe
EOG Whirling Winds 14 Fed Com 1H ST01 Surveys 0ft - 17190ft MD

Grid North
Tot Corr (M->G 6.9592°)
Mag Dec (7.383°)
Grid Conv (0.424°)

Critical Points

Comments	Survey MD	Inc	Azim	TVD	SSTVD	VS	NS	EW	Longitude	Latitude	Easting	Northing	DLS	Tool Face
SHL	0.00	0.00	0.00	0.00	-3367.00	0.00	0.00	0.00	N 32 3 0.619	W 103 32 4.824	747449.00	382893.00		138.96
Tie-In	9105.15	0.96	191.94	9102.77	5735.77	-20.50	-25.26	-139.04	N 32 3 0.379	W 103 32 6.441	747309.96	382867.74	1.06	350.80
Turn 12°/100ft DLS	9779.31	80.00	350.80	9580.47	6213.47	370.54	363.77	-204.55	N 32 3 4.233	W 103 32 7.169	747244.45	383256.76	12.00	40.89
Landing Point	9891.67	90.27	359.58	9590.00	6223.00	482.10	475.07	-213.85	N 32 3 5.335	W 103 32 7.267	747235.15	383368.06	12.00	-30.74
PBHL	17255.05	90.27	359.58	9555.00	6188.00	7842.76	7838.18	-268.01	N 32 4 18.201	W 103 32 7.264	747181.00	390731.00	0.00	



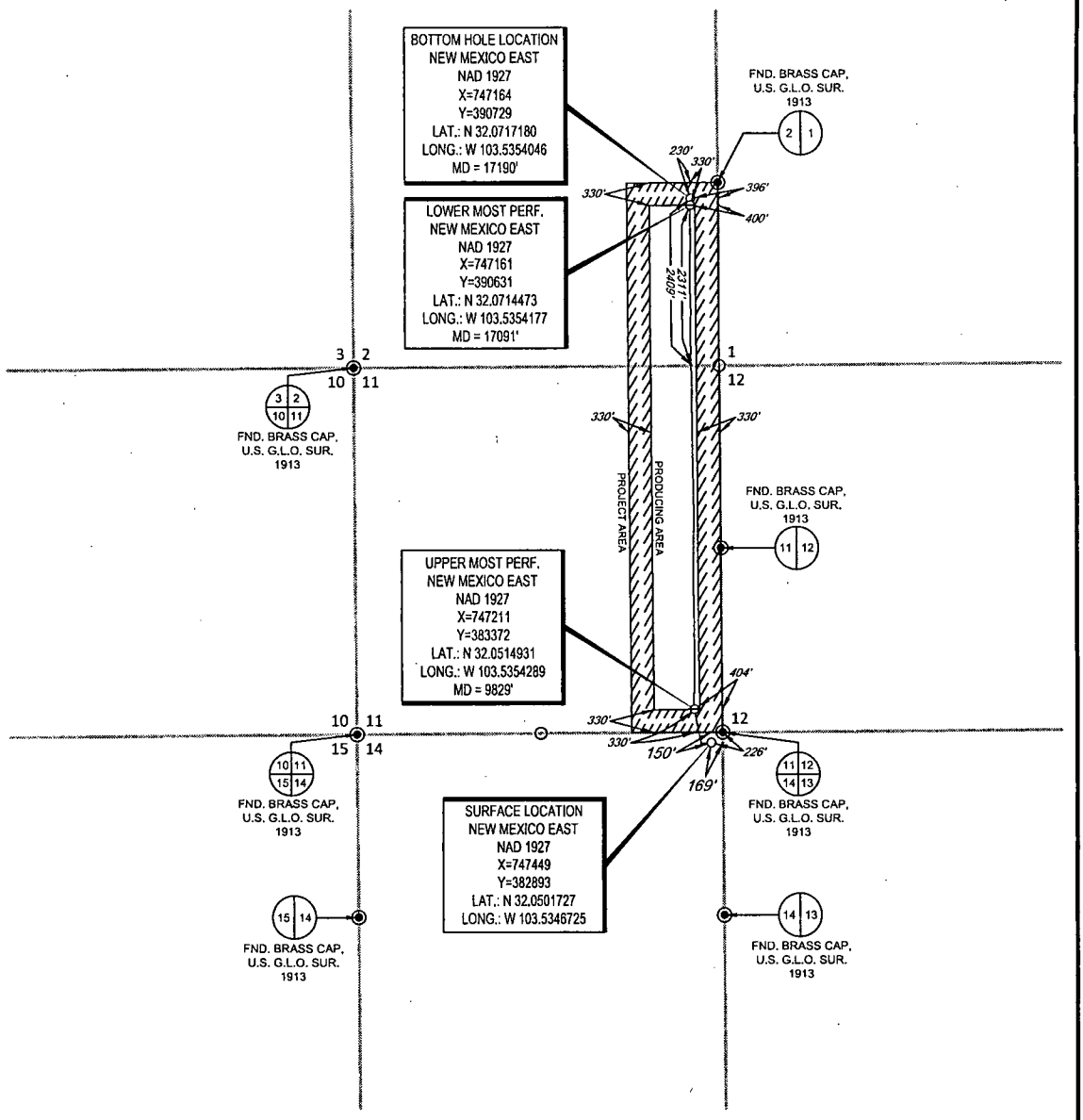


Drawn By: Matthew Shelby
Date Drawn: September 23, 2013 04:59:29 PM
Checked By:
Checked Date:
Approved By:
Approved Date:

SCALE: 1" = 2000'

0' 1000' 2000'

SECTION 14, TOWNSHIP 26 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: WHIRLING WIND 14 FED COM #1H

SECTION 14 TWP 26-S RGE 33-E SURVEY N.M.P.M.

COUNTY LEA STATE NM ELEVATION XXXX'

DESCRIPTION 150' FNL & 169' FEL

1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

eog resources, Inc.

"PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE."

Michael Blake Brown, P.S. No. 18329

NOVEMBER 1, 2013

WHIRLING WIND 14 FED COM #1H AS-COMPLETED	REVISION: INT	DATE
DATE: 11/1/13		
FILE: AD_WHIRLINGWIND14FEDCOM_1H		
DRAWN BY: S.V.		
SHEET: 1 OF 1		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 1 1"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 19 27.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY EOG RESOURCES, INC . ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. B.O.L./P.O.B. = BEGINNING OF LINE/POINT OF BEGINNING
5. E.O.L./P.O.E. = END OF LINE/POINT OF EXIT

Y:\SURVEY\EOG_MIDLAND\WHIRLING_WIND_14_FED\FINAL_PRODUCTS\AD_WHIRLINGWIND14FEDCOM_1H.DWG 11/2/2013 9:16:48 AM eochoa

EOG Whirling Winds 14 Fed Com 1H ST01 Surveys 0ft - 17190ft MD Survey
Geodetic Report

(Non-Def Survey)

PATHFINDER
A Schlumberger Company

Report Date:	January 10, 2014 - 12:01 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Eog Resources	**Vertical Section Azimuth:**	358.042 ° (Grid North)
Field:	NM Lea County (NAD 27)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	EOG Whirling Winds 14 Fed Com 1H / EOG Whirling Winds 14 Fed Com 1H	**TVD Reference Datum:**	RKB
Well:	EOG Whirling Winds 14 Fed Com 1H	**TVD Reference Elevation:**	3367.000 ft above
Borehole:	ST01	**Seabed / Ground Elevation:**	3337.000 ft above
UWI / API#:	Cactus 123 / Unknown	**Magnetic Declination:**	7.383 °
Survey Name:	EOG Whirling Winds 14 Fed Com 1H ST01 Surveys 0ft - 17190ft MD	**Total Gravity Field Strength:**	998.4784mgn (9.80665 Based)
Survey Date:	September 23, 2013	**Total Magnetic Field Strength:**	48251.583 nT
Tort / AHD / DDI / ERD Ratio:	171.529 ° / 8069.518 ft / 6.395 / 0.842	**Magnetic Dip Angle:**	59.926 °
Coordinate Reference System:	NAD27 New Mexico State Plane, Eastern Zone, US Feet	**Declination Date:**	September 23, 2013
Location Lat / Long:	N 32° 3' 0.61867", W 103° 32' 4.82370"	**Magnetic Declination Model:**	BGGM 2012
Location Grid N/E Y/X:	N 382893.000 ftUS, E 747449.000 ftUS	**North Reference:**	Grid North
CRS Grid Convergence Angle:	0.4238 °	**Grid Convergence Used:**	0.4238 °
Grid Scale Factor:	0.99997922	**Total Corr Mag North->Grid North:**	6.9592 °
		Local Coord Referenced To:	Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	TF (°)
SHL	0.00	0.00	0.00	0.00	-3367.00	0.00	0.00	0.00	0.00	0.00	N/A	382893.00	747449.00	N 32 3 0.62	W 103 32 4.82	138.96M
	100.00	0.85	138.96	100.00	-3267.00	-0.58	-0.56	0.49	0.74	138.96	0.85	382892.44	747449.49	N 32 3 0.61	W 103 32 4.82	141.94M
	200.00	0.91	141.94	199.98	-3167.02	-1.79	-1.74	1.46	2.28	140.00	0.08	382891.26	747450.46	N 32 3 0.60	W 103 32 4.81	154.96M
	300.00	1.13	154.98	299.97	-3067.03	-3.34	-3.26	2.37	4.03	144.01	0.32	382889.74	747451.37	N 32 3 0.59	W 103 32 4.80	136.18M
	400.00	0.88	136.18	399.95	-2967.05	-4.82	-4.71	3.32	5.76	144.83	0.41	382888.29	747452.32	N 32 3 0.57	W 103 32 4.79	146.51M
	500.00	0.96	146.51	499.94	-2867.06	-6.11	-5.96	4.31	7.36	144.12	0.18	382887.04	747453.31	N 32 3 0.56	W 103 32 4.77	125.08M
	600.00	1.08	125.08	599.93	-2767.07	-7.39	-7.20	5.55	9.09	142.41	0.40	382885.80	747454.55	N 32 3 0.55	W 103 32 4.76	114.63M
	700.00	1.52	114.63	699.90	-2667.10	-8.55	-8.30	7.52	11.20	137.80	0.50	382884.70	747456.52	N 32 3 0.54	W 103 32 4.74	116.38M
	800.00	1.62	116.38	799.86	-2567.14	-9.81	-9.48	10.00	13.77	133.48	0.11	382883.52	747458.99	N 32 3 0.52	W 103 32 4.71	120.73M
	900.00	1.71	120.73	899.82	-2467.18	-11.29	-10.87	12.54	16.60	130.91	0.16	382882.13	747461.54	N 32 3 0.51	W 103 32 4.68	123.92M
	960.00	1.74	123.92	959.79	-2407.21	-12.31	-11.83	14.07	18.39	130.07	0.17	382881.17	747463.07	N 32 3 0.50	W 103 32 4.66	119.27M
	1143.00	1.14	119.27	1142.73	-2224.27	-14.88	-14.28	17.96	22.94	128.47	0.33	382878.72	747466.96	N 32 3 0.48	W 103 32 4.62	259.19M
	1325.00	1.14	259.19	1324.72	-2042.28	-16.10	-15.50	17.76	23.58	131.11	1.18	382877.50	747466.76	N 32 3 0.48	W 103 32 4.62	261.92M
	1515.00	1.41	261.92	1514.67	-1852.33	-16.64	-16.18	13.59	21.13	139.97	0.15	382876.82	747462.59	N 32 3 0.48	W 103 32 4.67	262.01M
	1705.00	1.76	262.01	1704.60	-1662.40	-17.19	-16.92	8.39	18.88	153.62	0.18	382876.08	747457.39	N 32 3 0.45	W 103 32 4.73	283.36M
	1894.00	0.97	283.36	1893.54	-1473.46	-17.08	-16.95	3.96	17.41	166.86	0.49	382876.05	747452.96	N 32 3 0.45	W 103 32 4.78	275.45M
	2085.00	0.97	275.45	2084.52	-1282.48	-16.44	-16.42	0.78	16.44	177.29	0.07	382876.58	747449.78	N 32 3 0.46	W 103 32 4.82	280.64M
	2274.00	0.97	280.64	2273.49	-1093.51	-15.89	-15.98	-2.39	16.15	188.50	0.05	382877.02	747446.61	N 32 3 0.46	W 103 32 4.85	279.14M
	2464.00	0.88	279.14	2463.47	-903.53	-15.25	-15.45	-5.41	16.37	199.30	0.05	382877.55	747443.59	N 32 3 0.47	W 103 32 4.89	281.17M
	2653.00	0.62	281.17	2652.45	-714.55	-14.74	-15.02	-7.85	16.95	207.58	0.14	382877.98	747441.15	N 32 3 0.47	W 103 32 4.92	297.87M
	2843.00	0.62	297.87	2842.44	-524.56	-14.00	-14.34	-9.76	17.35	214.25	0.09	382878.66	747439.24	N 32 3 0.48	W 103 32 4.94	296.11M
	3033.00	1.49	296.11	3032.40	-334.60	-12.32	-12.77	-12.89	18.15	225.26	0.46	382880.23	747436.11	N 32 3 0.49	W 103 32 4.97	285.83M
	3223.00	0.97	285.83	3222.36	-144.64	-10.67	-11.25	-16.66	20.10	235.97	0.30	382881.75	747432.34	N 32 3 0.51	W 103 32 5.02	291.54M
	3412.00	1.23	291.54	3411.33	44.33	-9.37	-10.07	-20.08	22.46	243.38	0.15	382882.94	747428.92	N 32 3 0.52	W 103 32 5.06	279.94M
	3601.00	1.14	279.94	3600.29	233.29	-8.18	-9.00	-23.82	25.46	249.31	0.14	382884.00	747425.18	N 32 3 0.53	W 103 32 5.10	326.96M
	3790.00	0.70	326.96	3789.26	422.26	-6.80	-7.70	-26.30	27.41	253.68	0.44	382885.30	747422.70	N 32 3 0.54	W 103 32 5.13	246.01M
	3980.00	0.70	246.01	3979.25	612.25	-6.24	-7.20	-28.00	28.91	255.57	0.48	382885.80	747421.01	N 32 3 0.55	W 103 32 5.15	221.84M
	4171.00	1.85	221.84	4170.20	803.20	-8.90	-9.97	-31.12	32.68	252.23	0.65	382883.03	747417.88	N 32 3 0.52	W 103 32 5.19	265.17M
	4360.00	1.93	265.17	4359.11	992.11	-11.27	-12.51	-36.32	38.42	250.89	0.74	382880.49	747412.68	N 32 3 0.50	W 103 32 5.25	270.71M
	4549.00	1.14	270.71	4548.04	1181.04	-11.34	-12.76	-41.38	43.30	252.86	0.42	382880.24	747407.63	N 32 3 0.50	W 103 32 5.31	296.9M
	4739.00	1.85	296.90	4737.98	1370.98	-9.77	-11.35	-46.00	47.38	256.14	0.51	382881.65	747403.00	N 32 3 0.51	W 103 32 5.36	209.62M
	4928.00	1.58	209.62	4926.92	1559.92	-10.52	-12.23	-50.01	51.48	256.25	1.26	382880.77	747398.99	N 32 3 0.50	W 103 32 5.41	210.06M
	4954.00	1.49	210.06	4952.91	1585.91	-11.11	-12.84	-50.36	51.97	255.70	0.35	382880.18	747398.64	N 32 3 0.50	W 103 32 5.41	227.03M
	5104.00	1.49	227.03	5102.86	1735.86	-14.04	-15.85	-52.76	55.09	253.27	0.29	382877.15	747396.24	N 32 3 0.47	W 103 32 5.44	281.69M
	5199.00	2.11	281.69	5197.82	1830.82	-14.44	-16.34	-55.38	57.74	253.56	1.83	382876.66	747393.62	N 32 3 0.46	W 103 32 5.47	278.79M
	5388.00	1.58	278.79	5386.72	2019.72	-13.13	-15.24	-61.36	63.22	256.05	0.28	382877.76	747387.64	N 32 3 0.47	W 103 32 5.54	274.84M
	5578.00	1.58	274.84	5576.65	2209.65	-12.34	-14.62	-66.56	68.14	257.61	0.06	382878.38	747382.44	N 32 3 0.48	W 103 32 5.60	274.49M
	5767.00	1.14	274.49	5765.59	2398.59	-11.82	-14.25	-71.03	72.44	258.66	0.23	382878.75	747377.97	N 32 3 0.48	W 103 32 5.65	274.14M
	5957.00	1.06	274.14	5955.56	2588.56	-11.42	-13.98	-74.67	75.96	259.40	0.04	382879.02	747374.34	N 32 3 0.49	W 103 32 5.69	284.95M
	6147.00	0.88	284.95	6145.53	2778.53	-10.81	-13.47	-77.83	78.99	260.18	0.13	382879.53	747371.17	N 32 3 0.49	W 103 32 5.73	295.14M
	6337.00	1.32	295.14	6335.50	2968.50	-9.38	-12.17	-81.22	82.12	261.48	0.25	382880.83	747367.78	N 32 3 0.50	W 103 32 5.77	299.01M
	6527.00	1.41	299.01	6525.44	3158.44	-7.18	-10.10	-85.24	85.84	263.24	0.07	382882.90	747363.76	N 32 3 0.52	W 103 32 5.81	293.38M
	6718.00	1.67	293.38	6716.37	3349.37	-4.78	-7.86	-89.85	90.20	265.00	0.16	382885.14	747359.15	N 32 3 0.55	W 103 32 5.87	275.98M
	6909.00	1.67	275.98	6907.29	3540.29	-3.21	-6.46	-95.18	95.40	266.11	0.26	382886.54	747353.83	N 32 3 0.56	W 103 32 5.93	265.43M
	7098.00	1.06	265.43	7096.24	3729.24	-2.91	-6.32	-99.66	99.86	266.37	0.35	382886.68	747349.34	N 32 3 0.56	W 103 32 5.98	268.05M
	7288.00	1.14	268.05	7286.20	3919.20	-3.05	-6.59	-103.30	103.51	266.35	0.04	382886.41	747345.71	N 32 3 0.56	W 103 32 6.02	258.93M
	7478.00	1.32	258.93	7476.16	4109.16	-3.47	-7.14	-107.33	107.57	266.20	0.12	382885.86	747341.67	N 32 3 0.56	W 103 32 6.07	264.38M
	7668.00	1.67	264.38	7666.10	4299.10	-3.99	-7.83	-112.23	112.50	266.01	0.20	382885.17	747336.77	N 32 3 0.55	W 103 32 6.13	260.78M
	7858.00	1.67	260.78	7856.01	4489.01	-4.52	-8.54	-117.72	118.03	265.85	0.06	382884.46	747331.28	N 32 3 0.54	W 103 32 6.19	248.74M
	8048.00	1.85	248.74	8045.93	4678.93	-5.88	-10.10	-123.31	123.72	265.32	0.22	382882.90	747325.69	N 32 3 0.53	W 103 32 6.26	238.72M
	8237.00	1.41	238.72	8234.85	4867.85	-8.03	-12.41	-128.14	128.74	264.47	0.28	382880.59	747320.86	N 32 3 0.51	W 103 32 6.31	254.54M
	8427.00	1.32	254.54	8424.80	5057.80	-9.68	-14.21	-132.25	133.01	263.87	0.20	382878.79	747316.75	N 32 3 0.49	W 103 32 6.36	246.01M
	8616.00	1.14	246.01	8613.75	5246.75	-10.90	-15.55	-136.06	136.95	263.48	0.14	382877.45	747312.94	N 32 3 0.47	W 103 32 6.41	195.03M
	8805.00	0.79	195.03	8802.73	5435.73	-12.85	-17.58	-138.12	139.23	262.75	0.47	382875.42	747310.88	N 32 3 0.45	W 103 32 6.43	184.05M
	8995.00	2.11	184.05	8992.66	5625.66	-17.58	-22.33	-138.71	140.49	260.85	0.71	382870.67	747310.30	N 32 3 0.41	W 103 32 6.44	184.57M
	9011.00	2.11	184.57	9008.65	5641.65	-18.17	-22.92	-138.75	140.63	260.62	0.12	382870.08	747310.25	N 32 3 0.40	W 103 32 6.44	194.68M
	9025.00	1.49	194.68	9022.65	5655.65	-18.60	-23.35	-138.82	140.77	260.45	4.96	382869.65	747310.19	N 32 3 0.40	W 103 32 6.44	338.82M
	9056.00	2.99	336.82	9053.63	5686.63	-18.23	-23.00	-139.24	141.13	260.62	13.76	382870.00	747309.76	N 32 3 0.40	W 103 32 6.44	344.9M
	9088.00	7.56	344.90	9085.49	5718.49	-15.40	-20.20	-140.12	141.56	261.80	14.43	382872.80	747308.89	N 32 3 0.43	W 103 32 6.45	347.69M
	9119.00	11.08	347.69	9116.08	5749.08	-10.48	-15.32	-141.28	142.11	263.81	11.44	382877.88	747307.72	N 32 3 0.48	W 103 32 6.47	7.32R
	9151.00	15.65	349.86	9147.20	5780.20	-3.18	-8.06	-142.70	142.93	266.77	14.36	382884.94	747306.30	N 32 3 0.55	W 103 32 6.48	2.46L
	9183.00	20.14	349.30	9177.65	5810.65	6.54	1.61	-144.48	144.49	270.64	14.04	382894.61	747304.52	N 32 3 0.65	W 103 32 6.50	6.32L
	9214.00	23.04	348.48	9206.47	5839.47	17.80	12.80	-146.69	147.24	274.99	9.41	382905.80	747302.32	N 32 3 0.76	W 103 32 6.53	4.65L
	9246.00	26.82	347.80	9235.48	5868.48	31.09	25.99	-149.46	151.71	279.87	11.85	382918.99	747299.54	N 32 3 0.89	W 103 32 6.56	16.73L
	9277.00	29.81	346.00	9262.77	5895.77	45.51	40.31	-152.81	158.03	284.78	10.03	382933.31	747296.20	N 32 3 1.03	W 103 32 6.60	4.4R
	9309.00	34.12	346.59	9289.91	5922.91	62.09	56.77	-156.81	166.77	289.90	13.50	382949.76	747292.19	N 32 3 1.19	W 103 32 6.64	10.11R
	9341.00	38.69	347.89	9315.68	5948.66	80.74	75.28	-160.99	177.73	295.06	14.48	382968.28	747288.01	N 32 3 1.36	W 103 32 6.69	12.52R
	9372.00	42.47	349.13	9339.20	5972.20	100.63	95.04	-165.00	190.42	299.94	12.47	382988.04	747284.00	N 32 3 1.57	W 103 32 6.73	7.21R
	9404.00	45.46	349.66	9362.23	5995.23	122.59	116.88	-169.09	205.55	304.65	9.41	383009.87	747279.92	N 32 3 1.79	W 103 32 6.78	1.9R
	9436.00	47.92	349.77	9384.18	6017.18	145.62	139.79	-173.24	222.61	308.90	7.69	383032.78	747275.76	N 32 3 2.01	W 103 32 6.82	0.17R
	9468.00	50.47	349.78	9405.09	6038.09	169.59	163.62	-177.54	241.44	312.66	7.97	383056.62	747271.46	N 32 3 2.25	W 103 32 6.87	4.48L
	9500.00	53.02	349.53	9424.90	6057.90	194.45	188.34	-182.06	261.95	315.97	7.99	383081.33	747266.95	N 32 3 2.50	W 103 32 6.92	12.3L
	9531.00	55.40	348.90	9443.03	6076.03	219.30	213.04	-186.76	283.31	318.76	7.85	383106.03	747262.24	N 32 3 2.74	W 103 32 6.98	8.96L
	9563.00	58.04	348.41	9460.59	6093.59	245.69	239.27	-192.03	306.79	321.25	8.35	383132.26	747256.98	N 32 3 3.00	W 103 32 7.03	25.45L
	9594.00	59.88	347.40	9476.57	6109.57	271.83	265.23	-197.59	330.75	323.31	6.56	383158.23	747251.41	N 32 3 3.26	W 103 32 7.10	7R
	9626.00	61.82	347.67	9492.16	6125.16	299.31	292.52	-203.63	356.42	325.16	6.11	383185.52	747245.38	N 32 3 3.53	W 103 32 7.16	6.76R
	9656.00	64.02	347.96	9506.72	6139.72	327.35	320.37	-209.64	382.86	326.80	6.92	383213.36	747239.37	N 32 3 3.80	W 103 32 7.23	18.46R
	9689.00	66.30	348.79	9519.75	6152.75	355.08	347.92	-215.31	409.15	328.25	7.75	383240.92	747233.70	N 32 3 4.08	W 103 32 7.30	9.26R
	9721.00	68.41	349.16	9532.07	6165.07	384.24	376.91	-220.95	436.90	329.62	6.68	383269.90	747228.05	N 32 3 4.36	W 103 32 7.36	22.63R
	9753.00	70.70	350.17	9543.24	6176.24	413.90	406.41	-226.33	465.18	330.89	7.74	383299.40	747222.68	N 32 3 4.66	W 103 32 7.42	6.74R
	9785.00	74.04	350.58	9552.93	6185.93	444.12	436.47	-231.43	494.03	332.07	10.51	383329.46	747217.58	N 32 3 4.95	W 103 32 7.47	14.41R
	9816.00	76.77	351.30	9560.74	6193.74	473.89	466.09	-236.15	522.50	333.13	9.09	383359.08	747212.86	N 32 3 5.25	W 103 32 7.53	24.52R
	9848.00	79.84	352.72	9567.23	6200.23	505.05	497.12	-240.50	552.24	334.18	10.53	383390.11	747208.50	N 32 3 5.56	W 103 32 7.58	58.48R
	9879.00	80.99	354.61	9572.39	6205.39	535.52	527.50	-243.87	581.14	335.19	7.06	383420.49	747205.13	N 32 3 5.86	W 103 32 7.61	69.59R

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	TF (°)
	9911.00	82.13	357.67	9577.09	6210.09	567.15	559.07	-246.00	610.80	336.25	10.11	383452.06	747203.00	N 32 3 6.17	W 103 32 7.63	43.92R
	9943.00	85.12	0.55	9580.64	6213.64	598.94	590.87	-246.49	640.22	337.36	12.93	383483.85	747202.51	N 32 3 6.48	W 103 32 7.64	14.1R
	9974.00	86.79	0.97	9582.83	6215.83	629.83	621.78	-246.08	668.71	338.41	5.55	383514.77	747202.92	N 32 3 6.79	W 103 32 7.63	10.56R
	10006.00	88.99	1.38	9584.01	6217.01	661.76	653.75	-245.43	698.31	339.42	6.99	383546.74	747203.58	N 32 3 7.11	W 103 32 7.62	1.3R
	10038.00	89.43	1.39	9584.45	6217.45	693.70	685.74	-244.65	728.08	340.36	1.38	383578.73	747204.35	N 32 3 7.42	W 103 32 7.61	34.92R
	10069.00	89.96	1.76	9584.61	6217.61	724.64	716.73	-243.80	757.06	341.21	2.09	383609.71	747205.20	N 32 3 7.73	W 103 32 7.59	8.39L
	10164.00	90.57	1.67	9584.18	6217.18	819.44	811.69	-240.96	846.70	343.47	0.65	383704.67	747208.05	N 32 3 8.67	W 103 32 7.55	62.78L
	10259.00	90.75	1.32	9583.08	6216.08	914.27	906.65	-238.48	937.49	345.26	0.41	383799.63	747210.52	N 32 3 9.61	W 103 32 7.52	90L
	10354.00	90.75	0.97	9581.84	6214.84	1009.12	1001.62	-236.58	1029.16	346.71	0.37	383894.60	747212.42	N 32 3 10.55	W 103 32 7.49	121.53L
	10449.00	90.48	0.53	9580.82	6213.82	1104.01	1096.61	-235.34	1121.57	347.89	0.54	383989.58	747213.67	N 32 3 11.49	W 103 32 7.46	HS
	10544.00	90.57	0.53	9579.95	6212.95	1198.91	1191.60	-234.46	1214.45	348.87	0.09	384084.57	747214.54	N 32 3 12.43	W 103 32 7.45	HS
	10640.00	90.57	0.53	9578.99	6211.99	1294.82	1287.59	-233.57	1308.60	349.72	0.00	384180.56	747215.43	N 32 3 13.38	W 103 32 7.43	80.27L
	10735.00	90.75	359.48	9577.90	6210.90	1389.75	1382.58	-233.56	1402.17	350.41	1.12	384275.55	747215.44	N 32 3 14.32	W 103 32 7.42	152.78L
	10829.00	90.40	359.30	9576.95	6209.95	1483.72	1476.57	-234.57	1495.09	350.97	0.42	384369.54	747214.44	N 32 3 15.25	W 103 32 7.42	64.09L
	10924.00	90.57	358.95	9576.15	6209.15	1578.70	1571.56	-236.02	1589.18	351.46	0.41	384464.52	747212.99	N 32 3 16.19	W 103 32 7.43	LS
	11019.00	90.31	358.95	9575.42	6208.42	1673.69	1666.54	-237.76	1683.41	351.88	0.27	384559.50	747211.25	N 32 3 17.13	W 103 32 7.44	LS
	11114.00	90.22	358.95	9574.98	6207.98	1768.67	1761.52	-239.50	1777.73	352.26	0.09	384654.48	747209.51	N 32 3 18.07	W 103 32 7.45	160.91L
	11208.00	89.96	358.88	9574.83	6207.83	1862.66	1855.50	-241.29	1871.13	352.59	0.29	384748.46	747207.71	N 32 3 19.00	W 103 32 7.47	51.5R
	11303.00	90.31	359.30	9574.61	6207.61	1957.65	1950.49	-242.82	1965.55	352.90	0.59	384843.45	747206.19	N 32 3 19.94	W 103 32 7.48	27.9L
	11398.00	90.48	359.21	9573.96	6206.96	2052.62	2045.48	-244.05	2059.99	353.20	0.20	384938.43	747204.95	N 32 3 20.88	W 103 32 7.48	115.2L
	11493.00	90.40	359.04	9573.23	6206.23	2147.60	2140.47	-245.51	2154.50	353.46	0.20	385033.42	747203.50	N 32 3 21.82	W 103 32 7.49	81.41R
	11587.00	90.48	359.57	9572.50	6205.50	2241.58	2234.46	-246.65	2248.03	353.70	0.57	385127.40	747202.36	N 32 3 22.75	W 103 32 7.50	HS
	11683.00	90.66	359.57	9571.55	6204.55	2337.54	2330.45	-247.37	2343.54	353.94	0.19	385223.40	747201.64	N 32 3 23.70	W 103 32 7.50	90R
	11778.00	90.66	0.09	9570.45	6203.45	2432.49	2425.44	-247.65	2438.05	354.17	0.55	385318.39	747201.36	N 32 3 24.64	W 103 32 7.49	135L
	11872.00	90.57	0.00	9569.45	6202.45	2526.42	2519.44	-247.57	2531.57	354.39	0.14	385412.38	747201.43	N 32 3 25.57	W 103 32 7.48	90L
	11967.00	90.57	359.83	9568.50	6201.50	2621.37	2614.43	-247.71	2626.14	354.59	0.18	385507.37	747201.29	N 32 3 26.51	W 103 32 7.48	90R
	12062.00	90.57	0.62	9567.56	6200.56	2716.29	2709.42	-247.34	2720.69	354.78	0.83	385602.36	747201.66	N 32 3 27.45	W 103 32 7.46	168.44R
	12157.00	90.13	0.71	9566.97	6199.97	2811.19	2804.42	-246.24	2815.21	354.98	0.47	385697.35	747202.77	N 32 3 28.39	W 103 32 7.44	22.25L
	12252.00	90.57	0.53	9566.39	6199.39	2906.09	2899.41	-245.21	2909.76	355.17	0.50	385792.34	747203.79	N 32 3 29.33	W 103 32 7.42	152.1L
	12347.00	90.40	0.44	9565.59	6198.59	3001.00	2994.40	-244.41	3004.36	355.33	0.20	385887.33	747204.60	N 32 3 30.27	W 103 32 7.41	90L
	12442.00	90.40	0.18	9564.93	6197.93	3095.93	3089.40	-243.89	3099.01	355.49	0.27	385982.33	747205.11	N 32 3 31.21	W 103 32 7.39	45R
	12537.00	90.66	0.44	9564.05	6197.05	3190.85	3184.39	-243.38	3193.68	355.63	0.39	386077.32	747205.63	N 32 3 32.15	W 103 32 7.38	90L
	12632.00	90.66	0.00	9562.96	6195.96	3285.77	3279.39	-243.01	3288.36	355.78	0.46	386172.31	747205.99	N 32 3 33.09	W 103 32 7.37	135.54L
	12727.00	90.13	359.48	9562.30	6195.30	3380.73	3374.38	-243.45	3383.15	355.87	0.78	386267.30	747205.56	N 32 3 34.03	W 103 32 7.36	90L
	12823.00	90.13	359.13	9562.08	6195.08	3476.71	3470.37	-244.61	3478.96	355.97	0.36	386363.29	747204.40	N 32 3 34.98	W 103 32 7.37	111.12L
	12918.00	89.96	358.69	9562.01	6195.01	3571.69	3565.36	-246.42	3573.86	356.05	0.50	386458.28	747202.59	N 32 3 35.92	W 103 32 7.38	17.1R
	13012.00	90.22	358.77	9561.86	6194.86	3665.69	3659.33	-248.50	3667.76	356.12	0.29	386552.25	747200.51	N 32 3 36.85	W 103 32 7.40	148.47R
	13107.00	89.78	359.04	9561.86	6194.86	3760.68	3754.32	-250.32	3762.65	356.19	0.54	386647.23	747198.69	N 32 3 37.79	W 103 32 7.41	90L
	13202.00	89.78	358.77	9562.22	6195.22	3855.66	3849.30	-252.13	3857.55	356.25	0.28	386742.21	747196.87	N 32 3 38.73	W 103 32 7.42	55.31L
	13298.00	89.96	358.51	9562.44	6195.44	3951.66	3945.27	-254.41	3953.46	356.31	0.33	386838.18	747194.60	N 32 3 39.68	W 103 32 7.44	22.25L
	13393.00	90.40	358.33	9562.14	6195.14	4046.66	4040.23	-257.03	4048.40	356.36	0.50	386933.14	747191.98	N 32 3 40.62	W 103 32 7.46	90R
	13488.00	90.40	358.60	9561.48	6194.48	4141.65	4135.20	-259.57	4143.34	356.41	0.28	387028.10	747189.43	N 32 3 41.56	W 103 32 7.48	75.95R
	13583.00	90.84	0.36	9560.45	6193.45	4236.61	4230.18	-260.44	4238.19	356.48	1.91	387123.09	747188.57	N 32 3 42.50	W 103 32 7.49	86.52L
	13677.00	90.92	359.04	9559.01	6192.01	4330.56	4324.17	-260.93	4332.03	356.55	1.41	387217.07	747188.08	N 32 3 43.43	W 103 32 7.48	135R
	13772.00	90.66	359.30	9557.70	6190.70	4425.53	4419.15	-262.30	4426.93	356.60	0.39	387312.05	747186.70	N 32 3 44.37	W 103 32 7.49	90R
	13867.00	90.66	0.18	9556.60	6189.60	4520.48	4514.14	-262.74	4521.78	356.67	0.93	387407.04	747188.27	N 32 3 45.31	W 103 32 7.49	113.89L
	13962.00	90.31	359.39	9555.80	6188.80	4615.43	4609.14	-263.09	4616.64	356.73	0.91	387502.03	747185.91	N 32 3 46.25	W 103 32 7.48	19.09R
	14057.00	90.57	359.48	9555.07	6188.07	4710.40	4704.13	-264.03	4711.53	356.79	0.29	387597.02	747184.98	N 32 3 47.19	W 103 32 7.49	108.1R
	14150.00	90.40	0.00	9554.28	6187.28	4803.36	4797.12	-264.45	4804.41	356.84	0.59	387890.01	747184.56	N 32 3 48.11	W 103 32 7.48	45L
	14245.00	90.48	359.92	9553.55	6186.55	4898.30	4892.12	-264.52	4899.27	356.91	0.12	387785.01	747184.49	N 32 3 49.05	W 103 32 7.48	157.75L
	14340.00	90.04	359.74	9553.12	6186.12	4993.26	4987.12	-264.80	4994.14	356.96	0.50	387880.01	747184.21	N 32 3 49.99	W 103 32 7.47	119.85L
	14435.00	89.69	359.13	9553.35	6186.35	5088.23	5082.11	-265.74	5089.06	357.01	0.74	387975.00	747183.27	N 32 3 50.93	W 103 32 7.47	110.12L
	14531.00	89.43	358.42	9554.08	6187.08	5184.21	5178.09	-267.79	5185.01	357.04	0.79	388070.97	747181.22	N 32 3 51.88	W 103 32 7.49	20.06L
	14628.00	91.10	357.81	9553.64	6186.64	5279.21	5273.03	-270.91	5279.99	357.06	1.87	388165.91	747178.09	N 32 3 52.82	W 103 32 7.52	90L
	14721.00	91.10	357.54	9551.82	6184.82	5374.19	5367.94	-274.77	5374.96	357.07	0.28	388260.81	747174.24	N 32 3 53.76	W 103 32 7.55	19.09R
	14816.00	91.36	357.63	9549.78	6182.78	5469.17	5462.83	-278.77	5469.94	357.08	0.29	388355.71	747170.24	N 32 3 54.70	W 103 32 7.59	90R
	14911.00	91.36	358.51	9547.53	6180.53	5564.14	5557.75	-281.97	5564.90	357.10	0.93	388450.62	747167.04	N 32 3 55.64	W 103 32 7.62	102.87R
	15006.00	91.28	358.86	9545.34	6178.34	5659.11	5652.70	-284.15	5659.84	357.12	0.38	388545.57	747164.86	N 32 3 56.58	W 103 32 7.64	79.69R
	15101.00	91.36	359.30	9543.15	6176.15	5754.07	5747.66	-285.67	5754.76	357.15	0.47	388640.53	747163.34	N 32 3 57.52	W 103 32 7.65	94.7R
	15196.00	91.28	0.27	9540.96	6173.96	5849.00	5842.63	-286.03	5849.63	357.20	1.02	388735.50	747162.98	N 32 3 58.46	W 103 32 7.65	113.87R
	15291.00	91.01	0.88	9539.06	6172.06	5943.88	5937.61	-285.07	5944.45	357.25	0.70	388830.47	747163.93	N 32 3 59.39	W 103 32 7.63	65.59R
	15386.00	91.45	1.85	9537.02	6170.02	6038.70	6032.56	-282.81	6039.18	357.32	1.12	388925.42	747166.19	N 32 4 0.33	W 103 32 7.59	108.33L
	15481.00	90.75	359.74	9535.20	6168.20	6133.57	6127.53	-281.49	6133.99	357.37	2.34	389020.39	747167.51	N 32 4 1.27	W 103 32 7.57	69.62L
	15575.00	91.01	359.04	9533.76	6166.76	6227.53	6221.51	-282.49	6227.92	357.40	0.79	389114.37	747166.51	N 32 4 2.20	W 103 32 7.57	82.77L
	15670.00	91.10	358.33	9532.01	6165.01	6322.51	6316.47	-284.67	6322.88	357.42	0.75	389209.32	747164.33	N 32 4 3.14	W 103 32 7.59	LS
	15765.00	91.01	358.33	9530.26	6163.26	6417.49	6411.41	-287.44	6417.85	357.43	0.09	389304.27	747161.56	N 32 4 4.08	W 103 32 7.61	120.58R
	15861.00	90.75	358.77	9528.78	6161.78	6513.47	6507.37	-289.87	6513.82	357.45	0.53	389400.22	747159.14	N 32 4 5.03	W 103 32 7.63	90R
	15957.00	90.75	358.86	9527.53	6160.53	6609.46	6603.34	-291.86	6609.79	357.47	0.09	389496.19	747157.15	N 32 4 5.98	W 103 32 7.65	83.49R
	16051.00	90.84	359.65	9526.22	6159.22	6703.43	6697.32	-293.08	6703.73	357.49	0.85	389590.17	747155.93	N 32 4 6.91	W 103 32 7.65	104.42R
	16147.00	90.75	0.00	9524.89	6157.89	6799.37	6793.31	-293.37	6799.64	357.53	0.38	389686.16	747155.63	N 32 4 7.86	W 103 32 7.65	80.38R
	16242.00	90.84	0.53	9523.57	6156.57	6894.29	6888.30	-292.93	6894.53	357.56	0.57	389781.15	747156.07	N 32 4 8.80	W 103 32 7.64	65.98R
	16337.00	90.92	1.67	9522.11	6155.11	6989.14	6983.27	-291.11	6989.34	357.61	1.20	389876.11	747157.90	N 32 4 9.74	W 103 32 7.61	159.44R
	16431.00	89.96	2.03	9521.39	6154.39	7082.93	7077.22	-288.07	7083.08	357.67	1.09	389970.06	747160.93	N 32 4 10.67	W 103 32 7.56	62.22L
	16526.00	90.75	0.53	9520.80	6153.80	7177.77	7172.19	-285.95	7177.89	357.72	1.78	390065.03	747163.05	N 32 4 11.61	W 103 32 7.53	118.27L
	16621.00	90.04	359.21	9520.15	6153.15	7272.72	7267.18	-286.17	7272.82	357.74	1.58	390160.02	747162.84	N 32 4 12.55	W 103 32 7.52	37.32L
	16717.00	90.84	358.60	9519.41	6152.41	7368.70	7363.16	-288.00	7368.79	357.76	1.05	390256.00	747161.00	N 32 4 13.50	W 103 32 7.54	HS
	16812.00	90.92	358.60	9517.95	6150.95	7463.69	7458.12	-290.32	7463.77	357.77	0.08	390350.95	747158.68	N 32 4 14.44	W 103 32 7.56	93.71R
	16907.00	90.84	359.83	9516.49	6149.49	7558.66	7553.10	-291.62	7558.73	357.79	1.30	390445.93	747157.38	N 32 4 15.38	W 103 32 7.56	100.26R
	17001.00	90.57	1.32	9515.34	6148.34	7652.55	7647.09	-290.68	7652.61	357.82	1.61	390539.91	747158.33	N 32 4 16.31	W 103 32 7.54	60.55R
	17096.00	90.92	1.94	9514.10	6147.10	7747.36	7742.04	-287.98	7747.39	357.87	0.75	390634.86	747161.03	N 32 4 17.25	W 103 32 7.50	LS
Final Survey	17148.00	90.75	1.94	9513.34	6146.34	7799.23	7794.00	-286.22	7799.26	357.90	0.33	390686.83	747162.79	N 32 4 17.76	W 103 32 7.48	HS
Proj to TD	17190.00	90.75	1.94	9512.79	6145.79	7841.13	7835.98	-284.80	7841.15	357.92	0.00	390728.80	747164.21	N 32 4 18.18	W 103 32 7.46	

Survey Type: Non-Def Survey

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

Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)		Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	30.000		Act Stns	30.000	30.000	SLB_MWD-STD-Depth Only	Pilot / EOG Whirling Winds 14 Fed Com 1H Pilot Surveys
	30.000	8995.000		Act Stns	30.000	30.000	SLB_MWD-STD	Pilot / EOG Whirling Winds 14 Fed Com 1H Pilot Surveys
	8995.000	17148.000		Act Stns	30.000	30.000	SLB_MWD-STD	ST01 / EOG Whirling Winds 14 Fed Com 1H ST01 Surveys 0ft -
	17148.000	17190.000		Act Stns	30.000	30.000	SLB_BLIND+TREND	ST01 / EOG Whirling Winds 14 Fed Com 1H ST01 Surveys 0ft -

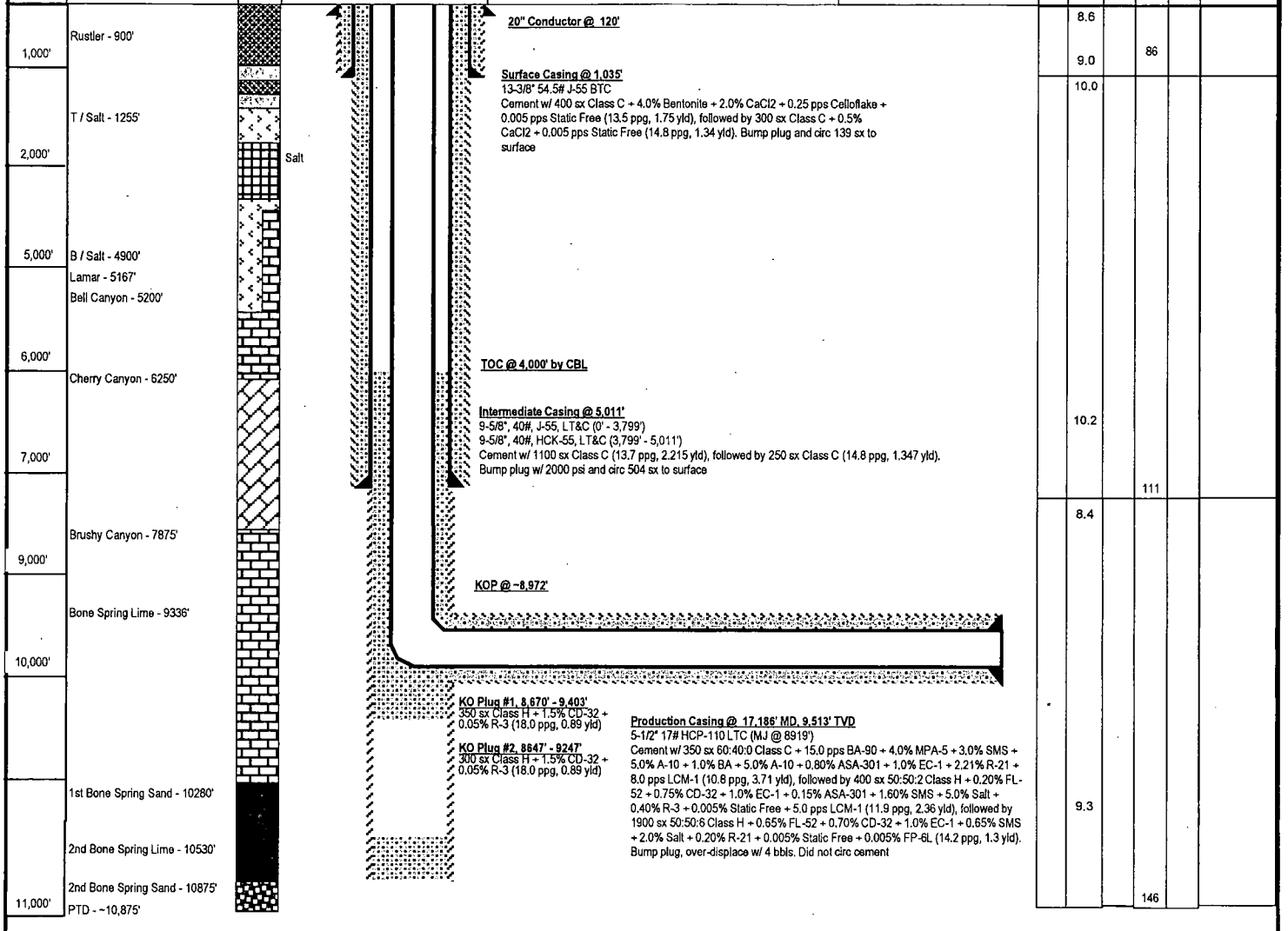
CURRENT WELL SKETCH

eog resources

OGRID:
API: 30-025-41212
AFE: 105592
SPUD: 9/11/13 @ 00:30 hrs
FRR: 10/12/13 @ 05:00 hrs
RIG: Cactus #123

Whirling Wind 14 Fed Com #1H
Red Hills (Bone Spring) Field
Lea County, New Mexico

SURF: 150' FNL & 170' FEL
LOC: Sec. 14
SURVEY: T-26-S, R-33-E
GL: 3337'
KB: 3367'
ZERO: 30.0' AGL



20" Conductor @ 120'

Surface Casing @ 1,035'
13-3/8" 54.5# J-55 BTC
Cement w/ 400 sx Class C + 4.0% Bentonite + 2.0% CaCl2 + 0.25 pps Celloflake + 0.005 pps Static Free (13.5 ppg, 1.75 yld), followed by 300 sx Class C + 0.5% CaCl2 + 0.005 pps Static Free (14.8 ppg, 1.34 yld). Bump plug and circ 139 sx to surface

TOC @ 4,000' by CBL

Intermediate Casing @ 5,011'
9-5/8", 40#, J-55, LT&C (0' - 3,799')
9-5/8", 40#, HCK-55, LT&C (3,799' - 5,011')
Cement w/ 1100 sx Class C (13.7 ppg, 2.215 yld), followed by 250 sx Class C (14.8 ppg, 1.347 yld). Bump plug w/ 2000 psi and circ 504 sx to surface

KOP @ ~8,972'

KO Plug #1, 8,670' - 9,403'
350 sx Class H + 1.5% CD-32 + 0.05% R-3 (18.0 ppg, 0.89 yld)

KO Plug #2, 8647' - 9247'
300 sx Class H + 1.5% CD-32 + 0.05% R-3 (18.0 ppg, 0.89 yld)

Production Casing @ 17,186' MD, 9,513' TVD
5-1/2" 17# HCP-110 LTC (MJ @ 8919')
Cement w/ 350 sx 60:40:0 Class C + 15.0 pps BA-90 + 4.0% MPA-5 + 3.0% SMS + 5.0% A-10 + 1.0% BA + 5.0% A-10 + 0.80% ASA-301 + 1.0% EC-1 + 2.21% R-21 + 8.0 pps LCM-1 (10.8 ppg, 3.71 yld), followed by 400 sx 50:50:2 Class H + 0.20% FL-52 + 0.75% CD-32 + 1.0% EC-1 + 0.15% ASA-301 + 1.60% SMS + 5.0% Salt + 0.40% R-3 + 0.005% Static Free + 5.0 pps LCM-1 (11.9 ppg, 2.36 yld), followed by 1900 sx 50:50:6 Class H + 0.65% FL-52 + 0.70% CD-32 + 1.0% EC-1 + 0.65% SMS + 2.0% Salt + 0.20% R-21 + 0.005% Static Free + 0.005% FP-6L (14.2 ppg, 1.3 yld). Bump plug, over-displace w/ 4 bbls. Did not circ cement

Drlg Eng:	R. Broglie
Date:	10/14/2013

Directions to Location:

From the intersection of State Hwy 18 & Hwy 128 in Jal , NM, go 14.9 miles west on 128 CR 2 (Battle Axe Road) on left (between mile marker 38 & 39). Turn south and go 13 miles to stop sign. Take right at stop sign and go .8 of a mile to Dinwiddie Road on left. Turn south and go .7 of a mile to lease road on left. Turn left (south east) for .6 of a mile to location on right - Cactus #123