

Results of Directional Survey

API number:	30-025-40853		
OGRID:		Operator:	COG PRODUCTION, LLC
		Property:	MACHO NACHO STATE # 3H

surface	ULSTR:	I	07	T 24S	R 33E
				1870 FSL	330 FEL

5227.2

BH Loc	ULSTR:	L	07	T 24S	R 33E
15271	MD	10891.0	TVD	1830 FSL	353 FWL
				4874 FEL	

Top Perf/OH	ULSTR:	I	07	T 24S	R 33E
11240	MD	10905.6	TVD	1885 FSL	651 FEL

Bot Perf/OH	ULSTR:	L	07	T 24S	R 33E
15107	MD	10892.9	TVD	1833 FSL	517 FWL
				4710 FEL	

	MD	N/S	E/W	VD
	11200	15.21	-328.42	10909.55
TOP PERFS/OH	11240	14.70	-320.73	10905.62
	11052	17.10	-356.87	10924.08
	15049	-35.67	-4321.60	10893.87
BOT PERFS/OH	15107	-36.88	-4379.58	10892.86
	15144	-37.65	-4416.56	10892.21

NEXT TO LAST	15222	-38.95	-4494.55	10891.32
LAST READING	15271	-39.72	-4543.54	10890.98
TD	15271	-39.72	-4543.54	10890.98

Surface Location	1870 FS	330 FE
Projected BHL	1830 FS	4874 FE
Location of		
Top Perfs/OH	1885 FS	651 FE
Bottom Perfs/OH	1833 FS	4710 FE

SUMMARY of Subsurface Locations

Surface Location	I-07-24S-33E	1870 FS	330 FE	Vert. Depth
Top Perfs/OH	I-07-24S-33E	1885 FS	651 FE	10905.62
Bottom Perfs/OH	L-07-24S-33E	1833 FS	4710 FE	10892.86
Projected TD	L-07-24S-33E	1830 FS	4874 FE	10890.98

JUL 25 2013



A GYRO TECHNOLOGIES INC. COMPANY

PO Box 261021
Corpus Christi, Texas 78426
(361) 767-0602 • (800) 606-GYRO • Fax (361) 767-0612

HOBBS OCD

MAY 23 2013

RECEIVED

February 27, 2013

COG Operating LLC (Concho)
One Concho Center
600 W. Illinois Avenue
Midland, TX 79701

Attn: Kanicia Castillo

Re: **Macho Nacho State No 003H**

Please find enclosed a copy of the survey from 0' to 10,333' ran on the above referenced well.

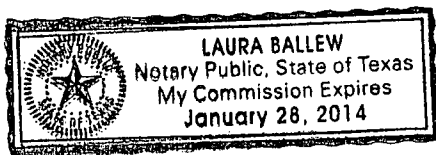
If I can be of any further service, please do not hesitate to call me at 800-606-4976.

Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 27th day of February, A.D., 2013, by Keith Havelka.



Laura Ballew
Notary Public, State of Texas



Company: COG Operating LP (Concho)
Lease/Well: Macho Nacho State/No 003H
Location: S7 T24s R33e
Rig Name: Basic 46
State/County: New Mexico/Lea
Latitude: 32.23, Longitude: -103.60
GRID North is 0.39 Degrees East of True North
VS-Azi: 0.00 Degrees



30-025-40853

RKB : 22 Feet

HOBBS OCD

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ...acho state #3h gyro survey.ut

Minimum Curvature Method

Report Date/Time: 2/27/2013 / 13:50

Vaughn Energy Services

(432) 563-5444

Gardendale, TX

Surveyor: Dustin Wedel

Macho Nacho State No 003H / API 30-025-40853

MAY 23 2013

RECEIVED

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W 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	****
100.00	0.67	359.56	100.00	0.59	0.00	0.59	359.56	0.67
200.00	0.43	359.78	199.99	1.54	-0.01	1.54	359.61	0.24
300.00	0.85	6.74	299.99	2.65	0.08	2.66	1.62	0.43
400.00	0.84	12.47	399.98	4.11	0.32	4.12	4.47	0.08
500.00	0.89	23.97	499.96	5.53	0.79	5.59	8.16	0.18
600.00	0.97	7.14	599.95	7.08	1.21	7.19	9.72	0.29
700.00	0.74	348.35	699.94	8.56	1.19	8.64	7.90	0.36
800.00	0.61	20.41	799.93	9.70	1.24	9.78	7.30	0.40
900.00	0.80	26.58	899.93	10.83	1.74	10.97	9.14	0.20
1000.00	1.27	358.11	999.91	12.56	2.02	12.72	9.13	0.68
1100.00	1.22	359.85	1099.89	14.74	1.98	14.87	7.65	0.06
1200.00	0.91	344.99	1199.87	16.56	1.77	16.66	6.10	0.42
1300.00	0.98	346.77	1299.86	18.16	1.37	18.21	4.32	0.08
1400.00	0.75	350.18	1399.84	19.63	1.06	19.66	3.11	0.23
1500.00	0.49	342.49	1499.84	20.68	0.83	20.70	2.29	0.27
1600.00	0.16	322.81	1599.84	21.20	0.61	21.21	1.66	0.34
1700.00	0.32	317.47	1699.84	21.51	0.34	21.52	0.91	0.16
1800.00	0.39	295.15	1799.83	21.86	-0.15	21.86	359.61	0.15

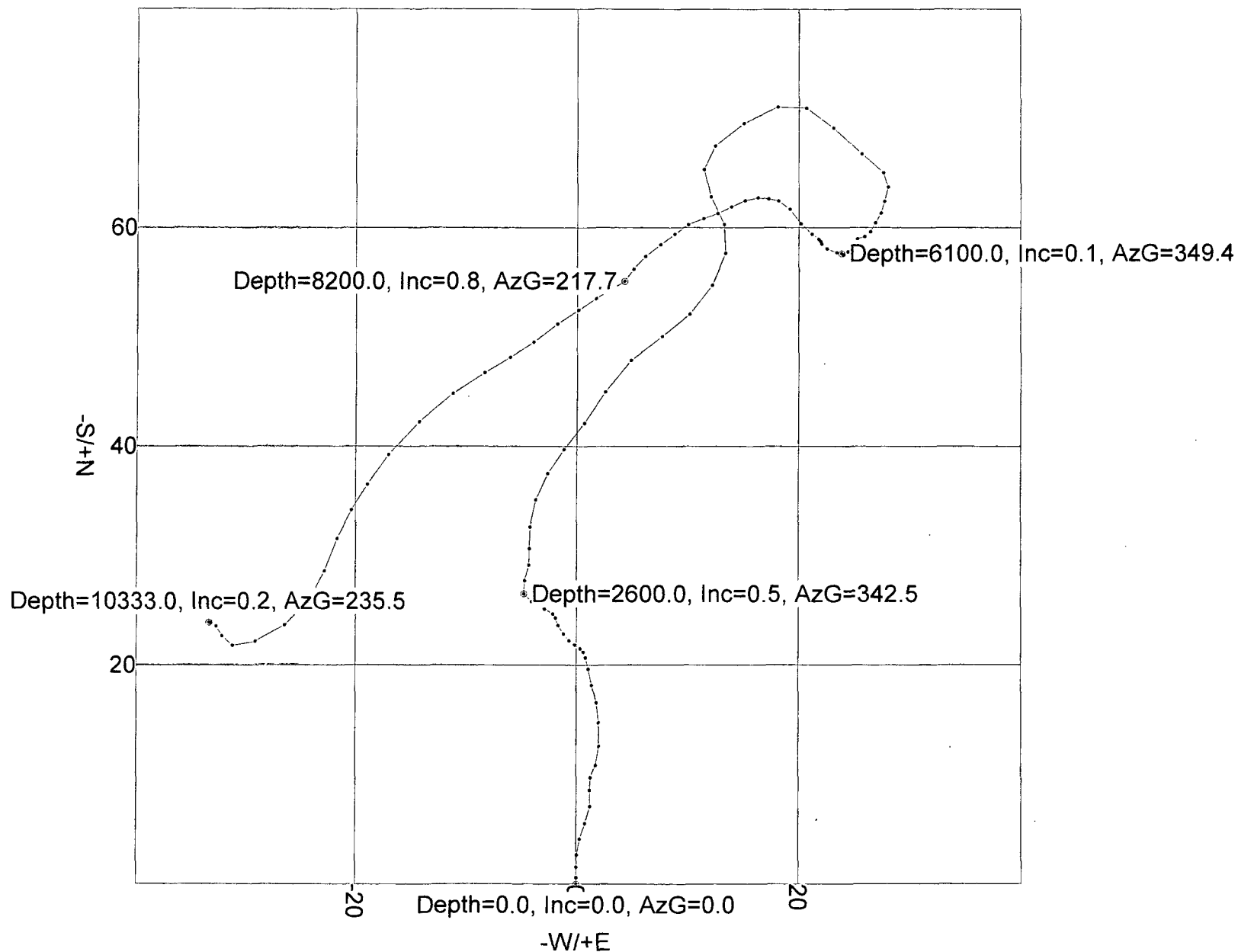
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.35	319.67	1899.83	22.23	-0.65	22.24	358.33	0.16
2000.00	0.58	322.24	1999.83	22.86	-1.16	22.89	357.11	0.23
2100.00	0.46	334.08	2099.82	23.62	-1.64	23.68	356.03	0.16
2200.00	0.37	345.31	2199.82	24.30	-1.90	24.37	355.53	0.12
2300.00	0.20	287.58	2299.82	24.67	-2.14	24.76	355.03	0.32
2400.00	0.80	304.84	2399.82	25.12	-2.88	25.28	353.46	0.62
2500.00	0.72	296.43	2499.81	25.80	-4.02	26.11	351.15	0.14
2600.00	0.52	342.55	2599.80	26.51	-4.71	26.93	349.92	0.52
2700.00	0.90	14.41	2699.79	27.71	-4.66	28.09	350.46	0.53
2800.00	0.81	13.33	2799.78	29.15	-4.30	29.46	351.61	0.09
2900.00	0.96	351.72	2899.77	30.66	-4.26	30.95	352.10	0.36
3000.00	1.33	8.74	2999.75	32.63	-4.20	32.90	352.66	0.50
3100.00	1.59	15.19	3099.72	35.12	-3.66	35.31	354.05	0.31
3200.00	1.44	33.84	3199.69	37.50	-2.60	37.59	356.04	0.51
3300.00	1.60	32.46	3299.65	39.72	-1.15	39.73	358.34	0.16
3400.00	1.87	40.85	3399.60	42.13	0.66	42.13	0.90	0.38
3500.00	2.06	26.49	3499.55	44.97	2.54	45.05	3.23	0.53
3600.00	2.26	49.31	3599.48	47.87	4.83	48.11	5.76	0.87
3700.00	1.83	55.31	3699.41	50.06	7.64	50.64	8.68	0.47
3800.00	1.84	46.10	3799.36	52.08	10.11	53.06	10.98	0.29
3900.00	2.04	29.49	3899.31	54.74	12.14	56.07	12.50	0.59
4000.00	1.63	13.97	3999.26	57.67	13.36	59.20	13.04	0.64
4100.00	1.53	338.67	4099.22	60.30	13.22	61.73	12.37	0.96
4200.00	1.68	330.26	4199.18	62.82	12.01	63.95	10.82	0.28
4300.00	1.40	5.39	4299.15	65.31	11.39	66.29	9.90	0.97
4400.00	1.47	43.76	4399.12	67.45	12.40	68.58	10.41	0.95
4500.00	2.37	56.52	4499.06	69.52	15.01	71.12	12.18	0.98
4600.00	1.60	74.82	4599.00	71.02	18.07	73.29	14.28	0.99
4700.00	1.52	111.21	4698.97	70.91	20.65	73.85	16.24	0.98
4800.00	2.07	137.14	4798.92	69.11	23.11	72.87	18.49	0.97
4900.00	1.97	127.84	4898.86	66.73	25.70	71.51	21.07	0.34
5000.00	1.02	138.60	4998.82	65.01	27.65	70.64	23.04	0.99
5100.00	0.77	197.76	5098.81	63.70	28.03	69.60	23.75	0.91
5200.00	0.77	189.14	5198.80	62.41	27.72	68.29	23.95	0.12
5300.00	0.53	206.10	5298.80	61.33	27.41	67.17	24.08	0.30
5400.00	0.63	214.37	5398.79	60.45	26.89	66.17	23.98	0.13
5500.00	0.45	198.46	5498.79	59.62	26.46	65.23	23.93	0.23
5600.00	0.45	259.58	5598.78	59.18	25.95	64.62	23.68	0.46
5700.00	0.33	242.88	5698.78	58.98	25.31	64.18	23.22	0.16

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.00	0.47	205.30	5798.78	58.48	24.87	63.55	23.04	0.29
5900.00	0.46	219.93	5898.78	57.80	24.44	62.76	22.92	0.12
6000.00	0.17	277.87	5998.77	57.52	24.04	62.34	22.68	0.39
6100.00	0.12	349.37	6098.77	57.64	23.87	62.39	22.50	0.18
6200.00	0.51	266.48	6198.77	57.72	23.41	62.28	22.08	0.50
6300.00	0.65	311.31	6298.77	58.06	22.55	62.29	21.22	0.46
6400.00	0.12	327.44	6398.77	58.53	22.06	62.55	20.65	0.54
6500.00	0.14	344.77	6498.77	58.74	21.97	62.71	20.51	0.05
6600.00	0.18	299.04	6598.76	58.93	21.81	62.84	20.31	0.13
6700.00	0.73	309.45	6698.76	59.41	21.18	63.08	19.62	0.56
6800.00	0.83	316.88	6798.75	60.35	20.19	63.64	18.50	0.14
6900.00	1.08	327.03	6898.74	61.67	19.18	64.58	17.28	0.30
7000.00	0.60	267.66	6998.73	62.44	18.14	65.02	16.20	0.93
7100.00	0.49	295.51	7098.72	62.60	17.23	64.93	15.39	0.28
7200.00	0.66	264.45	7198.72	62.73	16.28	64.80	14.55	0.35
7300.00	0.72	250.31	7298.71	62.46	15.11	64.26	13.60	0.18
7400.00	0.85	241.94	7398.70	61.90	13.86	63.43	12.62	0.18
7500.00	0.73	244.99	7498.69	61.28	12.62	62.56	11.64	0.13
7600.00	0.84	255.91	7598.68	60.83	11.34	61.88	10.56	0.18
7700.00	0.88	240.66	7698.67	60.27	9.96	61.09	9.38	0.23
7800.00	0.84	227.63	7798.66	59.40	8.74	60.05	8.37	0.20
7900.00	0.98	237.43	7898.65	58.45	7.49	58.93	7.30	0.21
8000.00	1.03	226.44	7998.63	57.37	6.12	57.70	6.08	0.20
8100.00	0.79	216.28	8098.62	56.19	5.05	56.42	5.14	0.29
8200.00	0.75	217.66	8198.61	55.11	4.24	55.28	4.40	0.04
8300.00	0.87	252.89	8298.60	54.37	3.11	54.46	3.27	0.50
8400.00	1.06	229.05	8398.59	53.54	1.69	53.57	1.80	0.44
8500.00	1.13	242.46	8498.57	52.48	0.11	52.48	0.12	0.27
8600.00	1.48	230.38	8598.54	51.20	-1.76	51.23	358.04	0.44
8700.00	1.62	233.61	8698.51	49.53	-3.89	49.69	355.51	0.17
8800.00	1.32	240.49	8798.47	48.12	-6.04	48.50	352.85	0.35
8900.00	1.77	236.90	8898.44	46.71	-8.33	47.45	349.88	0.45
9000.00	2.16	236.27	8998.38	44.82	-11.20	46.20	345.97	0.40
9100.00	2.41	223.55	9098.30	42.25	-14.22	44.58	341.40	0.56
9200.00	2.28	221.90	9198.22	39.25	-16.99	42.77	336.59	0.14
9300.00	1.59	205.52	9298.16	36.52	-18.92	41.13	332.61	0.88
9400.00	1.61	217.69	9398.12	34.15	-20.37	39.77	329.18	0.34
9500.00	1.77	196.77	9498.08	31.56	-21.68	38.29	325.51	0.63
9600.00	1.87	204.57	9598.03	28.59	-22.81	36.57	321.42	0.27

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
9700.00	1.72	210.18	9697.98	25.81	-24.24	35.41	316.79	0.24
9800.00	1.94	238.19	9797.93	23.62	-26.43	35.45	311.79	0.91
9900.00	1.56	244.89	9897.88	22.15	-29.10	36.57	307.28	0.43
10000.00	1.00	283.29	9997.86	21.78	-31.18	38.03	304.93	0.99
10100.00	0.78	348.99	10097.85	22.65	-32.16	39.34	305.15	0.98
10200.00	0.53	297.72	10197.84	23.53	-32.70	40.29	305.74	0.61
10300.00	0.24	311.33	10297.84	23.88	-33.26	40.95	305.67	0.30
10333.00	0.19	235.48	10330.84	23.89	-33.36	41.03	305.61	0.80



Vaughn Energy Services
(432) 563-5444
Gardendale, TX
Surveyor: Dustin Wedel
Macho Nacho State No 003H / API 30-025-40853



VES Survey Date: 02/22/2013



COG OPERATING, L.
RECEIVED

APR 12 2013

ARTESIA WEST

April 8, 2013

30-025-40853

New Mexico Energy, Minerals and Natural Resources Department
Attn: Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

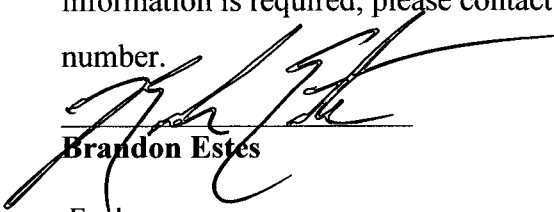
Attn: Jackie Lathan

Re: COG Production, L.L.C.
Macho Nacho State #003H
Triple X; Bone Spring, West
Lea County, New Mexico
API# 30-025-40853

Enclosed please find the original and one (1) copy of the survey performed on the reference well by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C. Other information required by your office is as follows:

<u>Name & Title</u>	<u>Drainhole No.</u>	<u>Survey Depths</u>	<u>Dates Performed</u>	<u>Type Survey</u>
Michael Robbins	Original Hole	10,367 ft. to 15,222 ft.	02-12-13 to 03-11-13	MWD Survey

A certified plat on which the bottom-hole location is oriented to both surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.


Brandon Estes

Enclosures

CC:

COG Production, L.L.C.
Attn: Tim Smith
2208 W. Main St
Artesia, NM 88210

COG Production, L.L.C.
Attn: Stormi Davis
2208 W. Main St
Artesia, NM 88210

NMEMaNRD\COG Production, L.L.C.\Macho Nacho State #003H\C131025

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.
P.O. Box 1250
Montgomery, TX 77356
Office (936) 582-7296 * Fax (936)-582-7297

ORIGINAL



April 8, 2013

Survey Certification Report

STATE OF TEXAS

COUNTY OF Montgomery

I, Todd Estes, certify that I am employed by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C., and that I did on the day(s) of February 12, 2013 thru March 11, 2013, conduct or supervise the taking of a SEDS MWD Survey from a depth of 10,367 feet to 15,222 feet; that I am authorized and qualified to make this report; that this survey was conducted at the request of COG Production, L.L.C, for the Macho Nacho State #003H well, API # **30-025-40853** in Lea County, New Mexico; and that I have reviewed this report and find that it conforms to the principles as set forth by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

A handwritten signature in black ink, appearing to read "Todd Estes", written over a horizontal line.

Todd Estes

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

P.O. Box 1250

Montgomery, TX 77356

Office (936) 582-7296 * Fax (936)-582-7297

30-025-40853 MACHO NACHO STATE #003H [39456]

General Well Information

Status: New (Not Drilled or Completed)

Well Type: Oil
Work Type: New
Surface Location: I-07-24S-33E 1870 FSL 330 FEL
Lat/Long: 32.2301021247929 -103.603954731904
GL Elevation: 3595

Direction:
Lease Type: State

Sing/Mult Compl:
Potash Waiver:

Proposed Formation and/or Notes

2nd Bone Spring Sand

Depths

Proposed: 15323

Measured: 0
Plugback Measured:

Formation Tops

Formation	Top	Method Obtained	Producing
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Event Dates

Initial APD Approval: 11/8/2012
Most Recent APD Approval: 11/8/2012
APD Cancellation:
APD Extension Approval:
Spud: 12/31/9999
Approved Temporary Abandonment:
Shut In Waiting For Pipeline:
Plug and Abandoned Intent Received:
Well Plugged:
Site Release:
Last Inspection:
Current APD Expiration: 11/8/2014
Expiration:
Plugged, Not Released Expiration:
Intention To Plug:
Last MIT:

History

Comments

Operator

Company: [217955] COG PRODUCTION, LLC
Address: 600 W. Illinois Ave
Midland, TX 79701
Country: U.S.A.
Main Phone: 432-683-7443

Central Contact Person

Hobbs Contacts

Artesia Contacts

Name: Ron Beasley
Phone: 575-746-2010
Cell: 432-254-9883
E-Mail Address: rbeasley@concho.com

Title:
Fax: 575-746-2096

Pits

Casing

Well Completions

[96674] TRIPLE X;BONE SPRING, WEST

Status: New, Not Drilled

Last Produced:

Financial Assurance

Compliance

Note that Financial Assurance and Inactive Well Compliance are documented in separate reports ([Inactive Well Report](#), [Financial Assurance Report](#)).

Also note that some compliance issues are addressed at the operator level so not listed under each well.



Job Number: C131025

State/Country: New Mexico / USA

Company: Concho Oil and Gas Operating, LLC

Declination: 7.01° Corrected to Grid

Lease/Well: Macho Nacho State # 3 H

Grid: 7.01°

Location: Lea County

File name: C:\WINSERVE\DOCS\C131025.SVY

Rig Name: Basic Rig # 46

Date/Time: 22-Mar-13 / 10:08

RKB: N/A

Curve Name: SES MWD SURVEY RAN ON 2-12-13

G.L. or M.S.L.: N/A

Stryker Energy Directional Services, LLC.

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 269.66
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

<i>Measured Depth FT</i>	<i>Incl Angle Deg</i>	<i>Drift Direction Deg</i>	<i>True Vertical Depth</i>	<i>N-S FT</i>	<i>E-W FT</i>	<i>Vertical Section FT</i>	<i>CLOSURE Distance FT</i>	<i>Direction Deg</i>	<i>Dogleg Severity Deg/100</i>
Tie-In Data Provided by VES Gyro Survey									
10333.00	.19	235.48	10330.84	23.89	-33.36	33.22	41.03	305.61	.00
10367.00	.30	215.50	10364.84	23.79	-33.46	33.32	41.05	305.41	.41
10398.00	.10	26.80	10395.84	23.74	-33.49	33.35	41.06	305.33	1.29
10429.00	1.50	251.80	10426.84	23.64	-33.87	33.73	41.30	304.92	5.07
10460.00	6.30	262.10	10457.76	23.28	-35.94	35.80	42.82	302.94	15.59
10491.00	9.10	270.70	10488.47	23.08	-40.07	39.94	46.24	299.93	9.74
10522.00	11.80	269.20	10518.96	23.06	-45.70	45.56	51.19	296.78	8.75
10554.00	14.90	265.60	10550.09	22.70	-53.07	52.94	57.72	293.16	10.03
10584.00	16.60	259.10	10578.96	21.59	-61.13	61.00	64.83	289.46	8.16
10615.00	20.40	258.90	10608.36	19.72	-70.78	70.66	73.48	285.57	12.26
10647.00	24.50	258.10	10637.93	17.27	-82.75	82.65	84.53	281.79	12.85
10678.00	27.30	259.70	10665.81	14.68	-96.04	95.95	97.15	278.69	9.31
10710.00	30.50	262.20	10693.82	12.26	-111.31	111.23	111.98	276.29	10.69
10741.00	34.10	266.10	10720.02	10.60	-127.78	127.71	128.22	274.74	13.41
10771.00	36.40	270.00	10744.52	10.03	-145.07	145.01	145.42	273.95	10.72
10801.00	38.50	273.10	10768.34	10.53	-163.30	163.24	163.64	273.69	9.40
10832.00	41.40	274.00	10792.10	11.77	-183.17	183.10	183.55	273.68	9.54
10864.00	43.80	271.60	10815.66	12.82	-204.80	204.72	205.20	273.58	9.06
10894.00	46.20	271.70	10836.87	13.43	-226.00	225.92	226.40	273.40	8.00
10926.00	50.80	271.00	10858.07	13.99	-249.95	249.87	250.35	273.20	14.47
10958.00	55.80	269.40	10877.19	14.07	-275.60	275.51	275.96	272.92	16.13
10989.00	58.20	270.40	10894.07	14.03	-301.60	301.51	301.92	272.66	8.20
11020.00	61.90	274.60	10909.55	15.21	-328.42	328.32	328.77	272.65	16.74
11052.00	64.10	273.00	10924.08	17.10	-356.87	356.76	357.27	272.74	8.19

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
11083.00	68.40	274.10	10936.56	18.86	-385.18	385.06	385.64	272.80	14.25
11115.00	70.80	279.50	10947.72	22.42	-414.94	414.80	415.55	273.09	17.50
11146.00	70.40	281.70	10958.02	27.80	-443.68	443.51	444.55	273.59	6.82
11178.00	64.90	282.40	10970.18	33.97	-472.61	472.40	473.83	274.11	17.31
11210.00	67.20	282.50	10983.17	40.28	-501.17	500.92	502.79	274.59	7.19
11240.00	72.70	279.90	10993.45	45.74	-528.80	528.52	530.78	274.94	20.06
11272.00	77.50	277.70	11001.68	50.46	-559.35	559.04	561.63	275.15	16.40
11303.00	83.80	276.60	11006.71	54.26	-589.69	589.36	592.18	275.26	20.62
11343.00	91.50	277.80	11008.35	59.27	-629.31	628.95	632.09	275.38	19.48
11373.00	94.30	278.00	11006.84	63.39	-658.98	658.60	662.02	275.49	9.36
11466.00	93.00	278.00	11000.92	76.30	-750.89	750.42	754.76	275.80	1.40
11590.00	92.40	278.80	10995.07	94.40	-873.42	872.85	878.51	276.17	.81
11684.00	91.80	279.20	10991.63	109.09	-966.20	965.54	972.34	276.44	.77
11777.00	91.50	276.50	10988.95	121.79	-1058.28	1057.54	1065.27	276.56	2.92
11872.00	91.30	273.70	10986.63	130.23	-1152.87	1152.08	1160.20	276.44	2.95
11964.00	91.30	273.20	10984.54	135.76	-1244.68	1243.85	1252.06	276.22	.54
12058.00	90.80	270.90	10982.82	139.12	-1338.60	1337.75	1345.81	275.93	2.50
12153.00	92.20	270.10	10980.33	139.95	-1433.56	1432.70	1440.37	275.58	1.70
12246.00	91.50	268.20	10977.33	138.57	-1526.49	1525.64	1532.77	275.19	2.18
12339.00	92.10	267.50	10974.41	135.09	-1619.38	1618.55	1625.01	274.77	.99
12434.00	92.60	267.40	10970.51	130.86	-1714.21	1713.40	1719.19	274.37	.54
12621.00	93.00	267.20	10961.38	122.07	-1900.78	1900.02	1904.69	273.67	.24
12714.00	92.00	267.40	10957.32	117.69	-1993.58	1992.85	1997.05	273.38	1.10
12808.00	92.50	267.90	10953.63	113.84	-2087.43	2086.72	2090.53	273.12	.75
12900.00	91.80	267.70	10950.18	110.31	-2179.30	2178.60	2182.09	272.90	.79
12992.00	91.50	267.20	10947.53	106.22	-2271.17	2270.50	2273.65	272.68	.63
13084.00	91.80	267.30	10944.88	101.81	-2363.02	2362.38	2365.22	272.47	.34
13179.00	91.10	267.70	10942.48	97.66	-2457.90	2457.28	2459.84	272.28	.85
13272.00	90.20	267.40	10941.42	93.69	-2550.81	2550.21	2552.53	272.10	1.02
13365.00	92.20	266.20	10939.48	88.50	-2643.64	2643.07	2645.12	271.92	2.51
13460.00	89.80	265.00	10937.82	81.21	-2738.34	2737.80	2739.54	271.70	2.82
13553.00	91.80	264.20	10936.52	72.46	-2830.91	2830.43	2831.84	271.47	2.32
13646.00	91.70	264.30	10933.68	63.15	-2923.40	2922.97	2924.08	271.24	.15
13740.00	90.80	264.80	10931.63	54.22	-3016.95	3016.57	3017.44	271.03	1.10
13833.00	93.10	265.60	10928.46	46.44	-3109.56	3109.23	3109.91	270.86	2.62
13926.00	93.30	265.10	10923.27	38.92	-3202.11	3201.82	3202.35	270.70	.58
14020.00	93.00	264.70	10918.11	30.57	-3295.60	3295.36	3295.74	270.53	.53
14114.00	93.40	265.00	10912.86	22.15	-3389.07	3388.88	3389.14	270.37	.53
14206.00	94.70	265.90	10906.36	14.87	-3480.55	3480.40	3480.58	270.24	1.72
14300.00	92.70	265.60	10900.30	7.92	-3574.09	3573.98	3574.10	270.13	2.15
14395.00	90.30	266.20	10897.81	1.13	-3668.81	3668.74	3668.81	270.02	2.60
14489.00	89.70	265.70	10897.81	-5.51	-3762.57	3762.54	3762.58	269.92	.83
14582.00	90.60	266.00	10897.57	-12.24	-3855.33	3855.33	3855.35	269.82	1.02
14675.00	89.20	265.70	10897.73	-18.97	-3948.08	3948.12	3948.13	269.72	1.54
14768.00	89.20	267.00	10899.03	-24.89	-4040.88	4040.96	4040.96	269.65	1.40

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
14861.00	91.60	267.50	10898.38	-29.35	-4133.76	4133.87	4133.87	269.59	2.64
14955.00	91.40	268.10	10895.92	-32.96	-4227.66	4227.78	4227.79	269.55	.67
15049.00	91.10	268.60	10893.87	-35.67	-4321.60	4321.74	4321.75	269.53	.62
15144.00	90.90	269.00	10892.21	-37.65	-4416.56	4416.71	4416.73	269.51	.47
15222.00	90.40	269.10	10891.32	-38.95	-4494.55	4494.70	4494.72	269.50	.65

Projection to Total Depth									
15271.00	90.40	269.10	10890.98	-39.72	-4543.54	4543.70	4543.72	269.50	.00