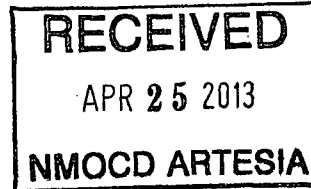




PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288



February 20, 2013

COG, LLC
One Concho Center
600 W. Illinois Ave.
Midland, TX 79701

30-015-37255

RE: Down South State Com #3H
Sec. 19, T26S, R28E
Eddy County, New Mexico

Dear Sir,

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

Very truly yours,

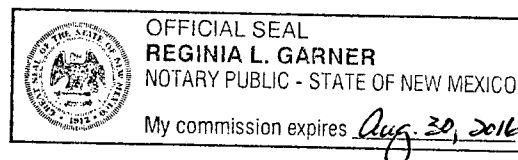
A handwritten signature in cursive script that reads "Chris Graham".

Chris Graham
Drilling Superintendent

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 20th day of February, 2013.

A handwritten signature in cursive script that reads "Regina L. Garner".

Notary Public

Down South St Com #3H

Date	Depth	Deviation	Direction	TVD
2/1/2013	203	0.60		
2/1/2013	342	0.70		
2/2/2013	419	0.60	271.90	
2/2/2013	507	1.00	248.00	
2/3/2013	595	1.50	240.40	594.96
2/3/2013	690	1.20	224.40	689.93
2/3/2013	786	0.30	216.90	785.92
2/3/2013	977	1.60	259.90	
2/3/2013	1168	3.10	274.30	1167.00
2/3/2013	1264	1.80	226.00	1263.00
2/3/2013	1359	1.60	152.00	1358.00
2/3/2013	1454	1.10	161.80	1453.00
2/3/2013	1635	1.60	174.00	1549.00
2/4/2013	1741	1.20	142.50	1740.46
2/4/2013	1932	1.90	1455.00	1931.41
2/4/2013	2028	3.90	123.70	2027.28
2/4/2013	2233	2.70	118.90	2231.00
2/6/2013	2604	1.10		
2/6/2013	3101	0.90		
2/6/2013	3594	0.50		
2/6/2013	4069	0.80		
2/6/2013	4544	1.10		
2/6/2013	5007	0.80		
2/7/2013	5519	1.10		
2/7/2013	6009	0.70		
2/7/2013	6496	3.00		
2/8/2013	6909	0.30		
2/8/2013	7211	0.90		
2/9/2013	7225	1.50	253.90	7222.00
2/9/2013	7288	1.90	252.40	7285.00
2/10/2013	7320	6.30	260.60	731.51
2/10/2013	7352	9.60	262.70	7349.20
2/10/2013	7384	14.10	262.20	7380.51
2/10/2013	7416	18.20	265.00	7411.24
2/10/2013	7511	27.00	267.00	7498.00
2/10/2013	7543	30.00	266.60	7526.00
2/11/2013	7574	33.90	265.50	7552.90
2/11/2013	7606	36.80	266.40	7579.08
2/11/2013	7637	38.80	268.00	7603.50
2/11/2013	7668	42.10	269.20	7627.09
2/11/2013	7700	45.90	272.60	7650.10
2/11/2013	7732	49.90	275.90	7671.56
2/11/2013	7859	60.90	276.40	7744.22

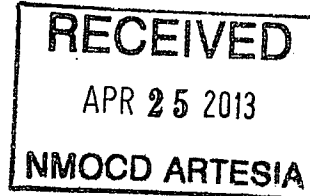
Date	Depth	Deviation	Direction	TVD
2/11/2013	7891	64.60	275.20	7758.87
2/11/2013	7986	75.30	266.40	7791.14
2/11/2013	8050	84.60	264.10	7802.38
2/12/2013	8079	89.50	264.50	7803.88
2/12/2013	8111	92.20	265.00	7803.40
2/12/2013	8143	93.00	265.20	7801.95
2/12/2013	8334	93.30	265.50	7795.37
2/12/2013	8525	91.00	266.30	7785.80
2/12/2013	8715	91.60	265.20	7781.25
2/12/2013	9097	91.40	265.50	7774.00
2/12/2013	9192	93.00	266.30	7770.00
2/13/2013	9288	93.00	266.10	7765.80
2/13/2013	9478	92.00	266.60	7756.19
2/13/2013	9763	92.00	265.90	7748.40
2/13/2013	9954	90.50	265.40	7745.64
2/13/2013	10145	92.40	265.90	7740.40
2/13/2013	10336	92.90	266.30	7731.00
2/13/2013	10528	90.70	266.60	7724.00
2/14/2013	10623	90.80	266.40	7723.54
2/14/2013	10910	91.80	265.40	7717.03
2/14/2013	11005	92.00	265.00	7713.88
2/14/2013	11100	90.60	265.70	7711.72
2/14/2013	11195	90.60	265.40	7710.73
2/14/2013	11291	90.60	266.60	7709.72
2/14/2013	11386	91.30	268.00	7708.15
2/14/2013	11481	91.50	267.80	7705.83
2/14/2013	11576	91.50	268.00	7703.34
2/15/2013	11767	92.10	267.50	7697.18
2/15/2013	11958	92.60	266.60	7689.43
2/15/2013	12054	92.90	266.60	7684.83
2/15/2013	12149	92.90	265.90	7680.02
2/15/2013	12190	92.80	265.90	7677.98



A GYRO TECHNOLOGIES INC. COMPANY

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

February 13, 2013



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

Attn: Kanicia Castillo

Re: **Down South State Com No 003H**

Please find enclosed a copy of the survey from 0' to 7,195' 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.

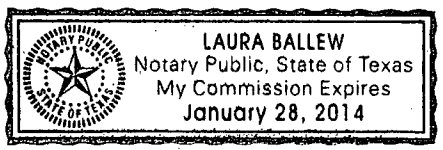
Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 13th day of February, A.D., 2013, by Keith Havelka.

Laura Ballew
Notary Public, State of Texas



Company: COG Operating LLC (Concho)
 Lease/Well: Down South State Com/No 003H



Rig Name: Silveroaks Rig 7
 State/County: New Mexico /Eddy
 Latitude: 32.03, Longitude: -104.12
 GRID North is 0.11 Degrees East of True North
 VS-Azi: 265.76 Degrees



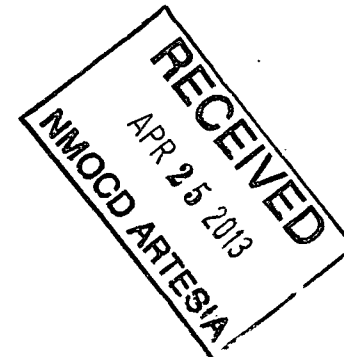
Depth Reference : RKB=17.80'

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: final survey .ut
 Minimum Curvature Method
 Report Date/Time: 2/13/2013 / 09:59

Vaughn Energy Services
 Fort Worth, Texas
 817-741-3610

Surveyor: Tim Kaczor
 Down South State Com No 003H / API 30-015-37255



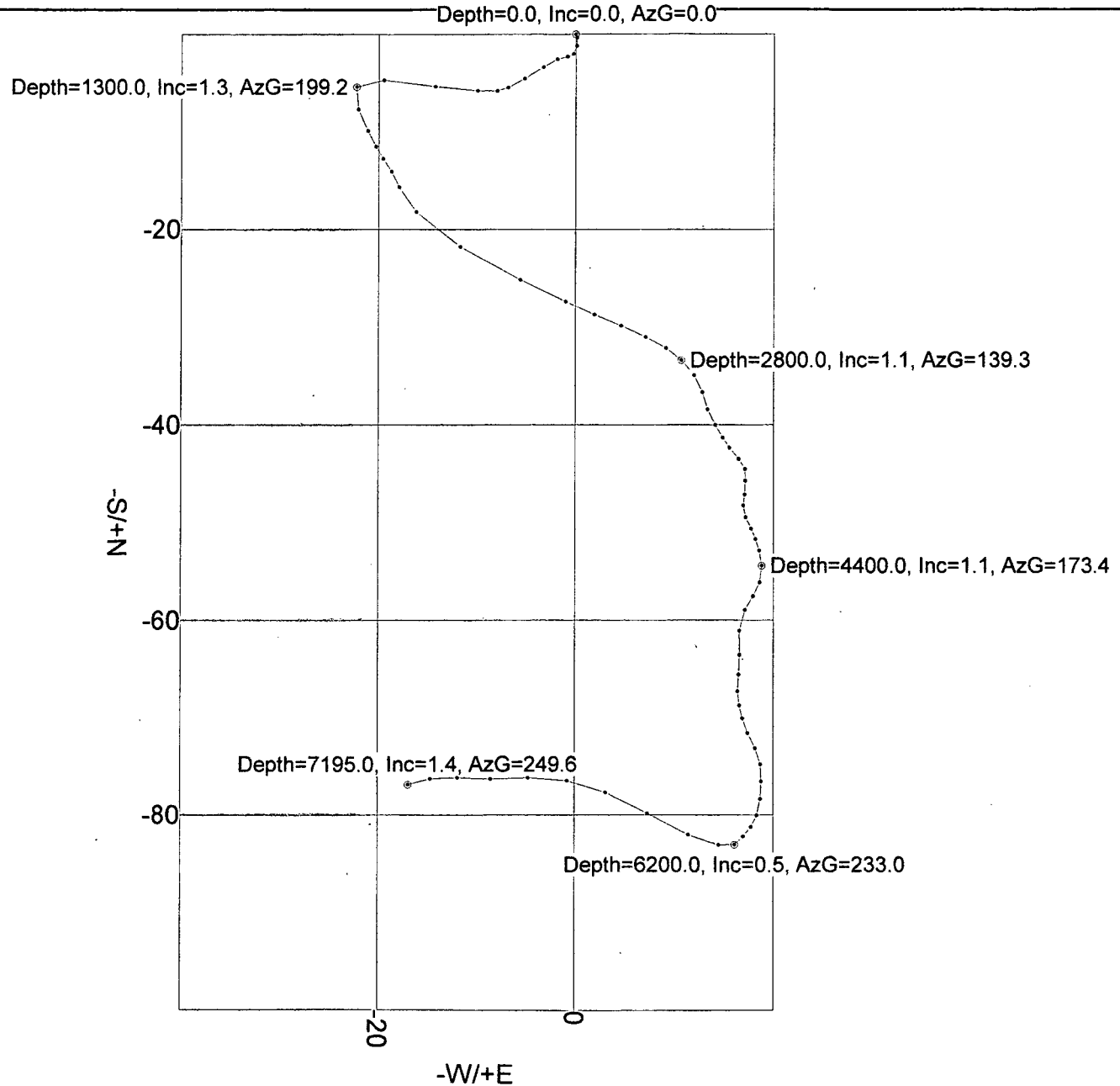
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.45	158.94	100.00	-0.36	0.14	-0.11	0.39	158.94	0.45
200.00	0.60	199.61	200.00	-1.22	0.10	-0.01	1.22	175.17	0.39
300.00	0.40	209.45	299.99	-2.02	-0.24	0.39	2.03	186.88	0.22
400.00	0.51	270.14	399.99	-2.32	-0.86	1.02	2.47	200.27	0.47
500.00	0.73	246.06	499.98	-2.57	-1.88	2.07	3.19	216.15	0.34
600.00	1.14	235.95	599.97	-3.39	-3.29	3.53	4.72	224.12	0.44
700.00	1.43	240.68	699.94	-4.56	-5.20	5.52	6.92	228.77	0.31
800.00	0.78	243.93	799.93	-5.47	-6.90	7.29	8.81	231.60	0.66
900.00	0.55	261.95	899.92	-5.84	-7.99	8.40	9.90	233.86	0.31
1000.00	1.72	274.28	999.90	-5.79	-9.97	10.37	11.53	239.84	1.19
1100.00	3.23	276.28	1099.80	-5.37	-14.27	14.62	15.24	249.37	1.51
1200.00	2.78	278.35	1199.66	-4.71	-19.46	19.76	20.03	256.39	0.46
1300.00	1.28	199.16	1299.61	-5.41	-22.23	22.57	22.88	256.32	2.83
1400.00	1.58	157.21	1399.58	-7.74	-22.06	22.57	23.38	250.67	1.06
1500.00	1.16	155.18	1499.55	-9.93	-21.10	21.77	23.32	244.80	0.42
1600.00	0.91	151.12	1599.54	-11.54	-20.29	21.09	23.34	240.37	0.26
1700.00	0.77	146.66	1699.53	-12.79	-19.54	20.43	23.36	236.78	0.16
1800.00	1.00	148.47	1799.52	-14.10	-18.71	19.71	23.43	233.00	0.24

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
1900.00	1.05	157.87	1899.50	-15.69	-17.91	19.02	23.81	228.77	0.17
2000.00	2.51	140.69	1999.45	-18.23	-16.18	17.49	24.38	221.59	1.54
2100.00	4.15	121.29	2099.28	-21.81	-11.70	13.28	24.75	208.21	1.97
2200.00	3.85	116.31	2199.04	-25.18	-5.60	7.44	25.79	192.54	0.47
2300.00	2.02	114.63	2298.90	-27.40	-0.99	3.01	27.42	182.06	1.82
2400.00	1.66	113.58	2398.85	-28.71	1.94	0.19	28.78	176.13	0.37
2500.00	1.69	112.68	2498.81	-29.86	4.63	-2.41	30.22	171.19	0.05
2600.00	1.44	117.31	2598.77	-31.01	7.11	-4.80	31.81	167.09	0.28
2700.00	1.23	119.69	2698.74	-32.12	9.17	-6.77	33.40	164.07	0.22
2800.00	1.09	139.32	2798.72	-33.37	10.72	-8.22	35.05	162.19	0.42
2900.00	1.22	141.22	2898.70	-34.92	12.00	-9.39	36.93	161.03	0.13
3000.00	1.07	169.77	2998.68	-36.66	12.83	-10.09	38.84	160.71	0.58
3100.00	1.05	155.99	3098.67	-38.42	13.37	-10.50	40.68	160.81	0.25
3200.00	1.00	152.37	3198.65	-40.03	14.15	-11.15	42.45	160.53	0.08
3300.00	0.71	147.17	3298.64	-41.32	14.89	-11.79	43.92	160.18	0.30
3400.00	0.70	145.35	3398.63	-42.34	15.57	-12.40	45.11	159.81	0.02
3500.00	1.00	136.97	3498.62	-43.48	16.51	-13.25	46.51	159.20	0.32
3600.00	0.45	174.81	3598.61	-44.51	17.14	-13.81	47.70	158.94	0.70
3700.00	0.93	180.50	3698.60	-45.72	17.17	-13.74	48.84	159.41	0.49
3800.00	0.69	185.88	3798.59	-47.13	17.10	-13.57	50.14	160.06	0.25
3900.00	0.60	187.00	3898.59	-48.25	16.98	-13.36	51.15	160.62	0.10
4000.00	0.86	155.47	3998.58	-49.45	17.23	-13.52	52.37	160.79	0.47
4100.00	0.62	155.94	4098.57	-50.63	17.76	-13.97	53.66	160.67	0.24
4200.00	0.70	158.99	4198.57	-51.70	18.20	-14.33	54.81	160.61	0.08
4300.00	0.71	166.04	4298.56	-52.87	18.57	-14.61	56.03	160.65	0.09
4400.00	1.09	173.40	4398.55	-54.41	18.83	-14.75	57.58	160.91	0.39
4500.00	0.96	202.85	4498.53	-56.13	18.61	-14.41	59.13	161.65	0.53
4600.00	0.80	207.38	4598.52	-57.52	17.96	-13.66	60.26	162.65	0.17
4700.00	1.09	210.59	4698.50	-58.96	17.16	-12.75	61.40	163.77	0.29
4800.00	1.49	183.34	4798.48	-61.07	16.60	-12.04	63.28	164.79	0.72
4900.00	1.37	175.26	4898.45	-63.55	16.62	-11.88	65.69	165.34	0.23
5000.00	0.97	192.76	4998.43	-65.57	16.54	-11.64	67.62	165.84	0.53
5100.00	1.04	175.49	5098.41	-67.29	16.42	-11.40	69.27	166.29	0.31
5200.00	0.65	168.94	5198.40	-68.75	16.60	-11.47	70.73	166.43	0.40
5300.00	0.89	164.26	5298.39	-70.06	16.92	-11.69	72.07	166.42	0.25
5400.00	0.96	158.37	5398.38	-71.58	17.44	-12.10	73.68	166.31	0.12
5500.00	1.01	150.65	5498.37	-73.13	18.18	-12.72	75.36	166.04	0.14
5600.00	1.02	174.11	5598.35	-74.78	18.70	-13.12	77.09	165.96	0.41
5700.00	1.00	180.56	5698.33	-76.54	18.79	-13.07	78.82	166.21	0.12

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
5800.00	1.05	184.95	5798.32	-78.33	18.70	-12.85	80.53	166.58	0.09
5900.00	0.93	199.26	5898.30	-80.01	18.35	-12.39	82.09	167.08	0.28
6000.00	0.62	214.61	5998.29	-81.22	17.78	-11.73	83.14	167.65	0.37
6100.00	0.83	220.80	6098.29	-82.21	17.00	-10.88	83.95	168.31	0.22
6200.00	0.54	232.98	6198.28	-83.04	16.15	-9.97	84.59	168.99	0.32
6300.00	1.46	281.00	6298.26	-83.08	14.52	-8.34	84.34	170.08	1.17
6400.00	2.27	293.93	6398.21	-82.03	11.46	-5.37	82.83	172.05	0.91
6500.00	3.09	301.65	6498.10	-79.81	7.36	-1.44	80.15	174.73	0.90
6600.00	2.34	290.66	6597.99	-77.68	3.15	2.60	77.74	177.68	0.91
6700.00	2.35	283.43	6697.91	-76.48	-0.75	6.41	76.49	180.56	0.30
6800.00	2.28	265.53	6797.83	-76.16	-4.73	10.35	76.31	183.55	0.72
6900.00	2.10	270.48	6897.75	-76.30	-8.54	14.16	76.78	186.39	0.26
7000.00	1.73	275.48	6997.70	-76.14	-11.89	17.48	77.06	188.87	0.41
7100.00	1.46	258.70	7097.66	-76.25	-14.64	20.24	77.64	190.87	0.54
7195.00	1.36	249.56	7192.63	-76.88	-16.89	22.53	78.71	192.39	0.26



Vaughn Energy Services
Fort Worth, Texas
817-741-3610
Surveyor: Tim Kaczor
Down South State Com No 003H / API 30-015-37255



VES Survey Date: 02/08/2013



February 21, 2013

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.
Down South State Com #003H
Hay Hollow; Bone Spring
Eddy County, New Mexico
API# 30-015-37255

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>
Noah Townsend	Original Hole	7,225 ft. to 12,190 ft.	02-02-13 to 02-15-13	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.\Down South State Com #003H\C131017

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

ORIGINAL



February 21, 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 02, 2013 thru February 15, 2013, conduct or supervise the taking of a SEDS MWD Survey from a depth of 7,225 feet to 12,190 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 Down South State Com #003H well, API # **30-015-37255** in Eddy 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". The signature is written in a cursive style and is positioned above 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

30-015-37255 DOWN SOUTH STATE COM #003 [308613]

General Well Information

Status: Never Drilled

Well Type: Oil
Work Type: New
Surface Location: I-19-26S-28E 2180 FSL 330 FEL
Lat/Long: 32.0264109898868 -104.119184395934
GL Elevation: 3030

Direction:
Lease Type: State

Sing/Mult Compl: Single
Potash Waiver:

Proposed Formation and/or Notes

BONE SPRING APD EXT TO 09/02/12

Depths

Proposed: 6550

Measured: 0
Plugback Measured:

Formation Tops

Formation	Top	Method Obtained	Producing
-----------	-----	-----------------	-----------

Event Dates

Initial APD Approval: 9/2/2009
Most Recent APD Approval: 9/2/2009
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: 9/2/2011
Expiration:
Plugged, Not Released Expiration:
Intention To Plug:
Last MIT:

History

Comments

Operator

Company: [229137] COG OPERATING LLC
Address: One Concho Center 600 W. Illinois Ave
Midland, TX 79701
Country: U.S.A.
Main Phone: 432-683-7443

Central Contact Person

Hobbs Contacts

Artesia Contacts

Name: Jim Corbitt
Phone: 432-818-2260
Cell:
E-Mail Address: jcorbitt@concho.com

Title:
Fax:

Pits

Casing

Well Completions

[30215] HAY HOLLOW;BONE SPRING

Status: Cancelled

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: C131017

Company: Concho Oil & Gas Operating, L.L.C.

Lease/Well: Down South State Com # 3 H

Location: Eddy County

Rig Name: Silver Oak # 7

RKB: N/A

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

State/Country: New Mexico / USA

Declination: 7.50° Corrected To Grid

Grid: 7.50°

File name: C:\WINSERVE\DOCS\C131017.SVY

Date/Time: 20-Feb-13 / 09:15

Curve Name: SES MWD SURVEY RAN ON 2-02-13

Stryker Energy Directional Services, LLC.

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 265.76
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
Tie-In Data Provided by VES Gyro Survey									
7195.00	1.36	249.56	7192.63	-76.88	-16.89	22.53	78.71	192.39	.00
7225.00	1.50	253.90	7222.62	-77.11	-17.60	23.25	79.10	192.86	.59
7257.00	1.00	252.90	7254.61	-77.31	-18.27	23.94	79.44	193.30	1.56
7288.00	1.90	252.40	7285.60	-77.55	-19.02	24.70	79.84	193.78	2.90
7320.00	6.30	260.60	7317.51	-77.99	-21.26	26.97	80.84	195.25	13.84
7352.00	9.60	262.70	7349.20	-78.62	-25.64	31.38	82.69	198.06	10.35
7384.00	14.10	262.20	7380.51	-79.49	-32.15	37.94	85.74	202.02	14.07
7416.00	18.20	265.00	7411.24	-80.45	-40.99	46.83	90.29	207.00	13.04
7447.00	21.70	266.60	7440.38	-81.22	-51.54	57.40	96.19	212.40	11.43
7479.00	25.10	266.60	7469.74	-81.97	-64.23	70.11	104.13	218.08	10.62
7511.00	27.00	267.00	7498.49	-82.75	-78.26	84.16	113.89	223.40	5.96
7543.00	30.00	266.60	7526.61	-83.61	-93.50	99.42	125.43	228.20	9.39
7574.00	33.90	265.50	7552.91	-84.74	-109.86	115.82	138.75	232.35	12.72
7606.00	36.80	266.40	7579.01	-86.05	-128.33	134.34	154.50	236.16	9.21
7637.00	38.80	268.00	7603.50	-86.97	-147.30	153.33	171.06	239.44	7.18
7668.00	42.10	269.20	7627.09	-87.45	-167.40	173.41	188.87	242.42	10.94
7700.00	45.90	272.60	7650.10	-87.08	-189.62	195.54	208.66	245.33	13.98
7732.00	49.90	275.20	7671.56	-85.45	-213.30	219.03	229.78	248.17	13.88
7764.00	52.70	276.40	7691.56	-82.92	-238.14	243.62	252.16	250.80	9.23
7796.00	54.60	276.60	7710.53	-80.00	-263.75	268.94	275.61	253.13	5.96
7827.00	57.50	278.20	7727.84	-76.69	-289.24	294.12	299.24	255.15	10.29
7859.00	60.90	276.40	7744.22	-73.20	-316.50	321.05	324.86	256.98	11.67
7891.00	64.60	275.20	7758.87	-70.33	-344.80	349.06	351.90	258.47	12.03
7923.00	68.40	273.10	7771.63	-68.22	-374.06	378.08	380.23	259.66	13.31

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth			Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
				N-S FT	E-W FT		Distance FT	Direction Deg	
7954.00	72.00	269.40	7782.13	-67.59	-403.21	407.10	408.84	260.48	16.15
7986.00	75.30	266.40	7791.14	-68.72	-433.89	437.78	439.30	261.00	13.68
8018.00	79.80	264.30	7798.04	-71.26	-465.02	469.02	470.45	261.29	15.45
8050.00	84.60	264.10	7802.38	-74.46	-496.55	500.70	502.11	261.47	15.01
8079.00	89.50	264.10	7803.87	-77.44	-525.35	529.64	531.03	261.61	16.90
8111.00	92.20	265.00	7803.40	-80.48	-557.20	561.63	562.98	261.78	8.89
8143.00	93.00	265.20	7801.95	-83.21	-589.05	593.59	594.90	261.96	2.58
8238.00	90.80	265.40	7798.80	-90.99	-683.67	688.53	689.70	262.42	2.33
8334.00	93.30	265.50	7795.37	-98.60	-779.30	784.46	785.52	262.79	2.61
8429.00	93.60	265.50	7789.65	-106.04	-873.84	879.29	880.25	263.08	.32
8525.00	91.00	266.30	7785.80	-112.90	-969.51	975.20	976.06	263.36	2.83
8620.00	91.20	265.40	7783.97	-119.77	-1064.24	1070.18	1070.96	263.58	.97
8715.00	91.60	265.20	7781.65	-127.55	-1158.89	1165.15	1165.89	263.72	.47
8811.00	91.90	264.70	7778.72	-136.00	-1254.47	1261.10	1261.82	263.81	.61
8906.00	89.70	265.90	7777.39	-143.78	-1349.14	1356.08	1356.78	263.92	2.64
9001.00	91.20	266.30	7776.65	-150.24	-1443.91	1451.07	1451.71	264.06	1.63
9097.00	91.40	265.50	7774.47	-157.10	-1539.64	1547.04	1547.64	264.17	.86
9192.00	93.00	266.30	7770.82	-163.89	-1634.32	1641.97	1642.52	264.27	1.88
9288.00	93.00	266.10	7765.80	-170.24	-1729.98	1737.83	1738.34	264.38	.21
9383.00	93.30	265.40	7760.58	-177.27	-1824.58	1832.69	1833.17	264.45	.80
9478.00	92.00	266.60	7756.18	-183.89	-1919.24	1927.58	1928.03	264.53	1.86
9574.00	91.10	267.00	7753.59	-189.25	-2015.05	2023.53	2023.92	264.63	1.03
9669.00	91.60	266.80	7751.35	-194.39	-2109.89	2118.49	2118.82	264.74	.57
9763.00	92.00	265.90	7748.40	-200.37	-2203.65	2212.43	2212.74	264.80	1.05
9859.00	90.40	265.50	7746.39	-207.56	-2299.36	2308.41	2308.71	264.84	1.72
9954.00	90.50	265.40	7745.64	-215.10	-2394.05	2403.40	2403.70	264.87	.15
10050.00	91.70	265.90	7743.80	-222.38	-2489.76	2499.38	2499.67	264.90	1.35
10145.00	92.40	265.90	7740.40	-229.17	-2584.45	2594.32	2594.59	264.93	.74
10240.00	92.80	265.20	7736.09	-236.53	-2679.07	2689.22	2689.49	264.95	.85
10336.00	92.90	266.30	7731.32	-243.64	-2774.68	2785.10	2785.36	264.98	1.15
10432.00	92.10	267.30	7727.13	-248.99	-2870.44	2880.99	2881.22	265.04	1.33
10528.00	90.70	266.60	7724.78	-254.10	-2966.27	2976.94	2977.14	265.10	1.63
10623.00	90.80	266.40	7723.54	-259.89	-3061.09	3071.93	3072.10	265.15	.24
10719.00	91.10	266.30	7721.95	-266.01	-3156.88	3167.91	3168.07	265.18	.33
10814.00	91.50	266.10	7719.79	-272.30	-3251.65	3262.88	3263.03	265.21	.47
10910.00	91.80	265.40	7717.03	-279.41	-3347.34	3358.84	3358.98	265.23	.79
11005.00	92.00	265.00	7713.88	-287.36	-3441.96	3453.78	3453.93	265.23	.47
11100.00	90.60	265.70	7711.72	-295.06	-3536.62	3548.75	3548.90	265.23	1.65
11195.00	90.60	265.40	7710.73	-302.43	-3631.33	3643.75	3643.90	265.24	.32
11291.00	90.60	266.60	7709.72	-309.12	-3727.08	3739.74	3739.88	265.26	1.25
11386.00	91.30	268.00	7708.15	-313.60	-3821.96	3834.69	3834.81	265.31	1.65
11481.00	91.50	267.80	7705.83	-317.08	-3916.87	3929.59	3929.68	265.37	.30
11576.00	91.50	268.00	7703.34	-320.56	-4011.77	4024.49	4024.56	265.43	.21
11672.00	91.90	267.70	7700.49	-324.16	-4107.66	4120.39	4120.43	265.49	.52
11767.00	92.10	267.50	7697.18	-328.13	-4202.52	4215.28	4215.31	265.54	.30



**CONCHO OIL AND GAS
OPERATING, L.L.C.**

EDDY COUNTY

SECTION 19

Down South State Com #3H

Wellbore #1

Survey: As-Drilled Survey

Survey Report - Geographic

20 February, 2013





Stryker Directional
Survey Report - Geographic



Company:	CONCHO OIL AND GAS OPERATING, L.L.C.	Local Co-ordinate Reference:	Well Down South State Corn #3H
Project:	EDDY COUNTY	TVD Reference:	Well @ 3048.0usft (SILVER OAK #7)
Site:	SECTION 19	MD Reference:	Well @ 3048.0usft (SILVER OAK #7)
Well:	Down South State Com #3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	As-Drilled Survey	Database:	EDM 5000.1 Single User Db

Project	EDDY COUNTY, NM-East		
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	SECTION 19				
Site Position:		Northing:	373,513.10 usft	Latitude:	32° 1' 36.192 N
From:	Map	Easting:	566,531.90 usft	Longitude:	104° 7' 7.135 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.11 °

Well	Down South State Com #3H					
Well Position	+N-S	0.0 usft	Northing:	373,513.10 usft	Latitude:	32° 1' 36.192 N
	+E-W	0.0 usft	Easting:	566,531.90 usft	Longitude:	104° 7' 7.135 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,030.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF200510	1/25/2013	7.62	59.90	48,323

Design	As-Drilled Survey				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.0	0.0	0.0		265.76

Survey Program:	Date	2/19/2013			
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
7,225.0	12,247.0	As-Drilled Survey (Wellbore #1)			

Survey										
Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Map	Map	Latitude	Longitude	
Depth	(°)	(°)	Depth	(usft)	(usft)	Northing	Easting			
(usft)			(usft)			(usft)	(usft)			
7,195.0	1.36	249.56	7,192.6	-76.9	-16.9	373,436.22	566,515.01	32° 1' 35.432 N	104° 7' 7.333 W	
TI @ 7195 MD, 1.36°										
7,225.0	1.50	253.90	7,222.6	-77.1	-17.6	373,435.99	566,514.30	32° 1' 35.430 N	104° 7' 7.341 W	
7,257.0	1.00	252.90	7,254.6	-77.3	-18.3	373,435.79	566,513.63	32° 1' 35.428 N	104° 7' 7.349 W	
7,288.0	1.90	252.40	7,285.6	-77.5	-19.0	373,435.55	566,512.88	32° 1' 35.425 N	104° 7' 7.358 W	
7,320.0	6.30	260.60	7,317.5	-78.0	-21.3	373,435.10	566,510.65	32° 1' 35.421 N	104° 7' 7.384 W	
7,352.0	9.60	262.70	7,349.2	-78.6	-25.6	373,434.48	566,506.27	32° 1' 35.415 N	104° 7' 7.434 W	
7,384.0	14.10	262.20	7,380.5	-79.5	-32.1	373,433.61	566,499.75	32° 1' 35.406 N	104° 7' 7.510 W	
7,416.0	18.20	265.00	7,411.2	-80.5	-41.0	373,432.65	566,490.91	32° 1' 35.397 N	104° 7' 7.613 W	
7,447.0	21.70	266.60	7,440.4	-81.2	-51.5	373,431.88	566,480.36	32° 1' 35.390 N	104° 7' 7.735 W	
7,479.0	25.10	266.60	7,469.7	-82.0	-64.2	373,431.13	566,467.68	32° 1' 35.382 N	104° 7' 7.883 W	
7,511.0	27.00	267.00	7,498.5	-82.8	-78.3	373,430.35	566,453.65	32° 1' 35.375 N	104° 7' 8.046 W	



Stryker Directional
Survey Report - Geographic



Company:	CONCHO OIL AND GAS OPERATING, L.L.C.	Local Co-ordinate Reference:	Well Down South State Com #3H
Project:	EDDY COUNTY	TVD Reference:	Well @ 3048.0usft (SILVER OAK #7)
Site:	SECTION 19	MD Reference:	Well @ 3048.0usft (SILVER OAK #7)
Well:	Down South State Com #3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	As-Drilled Survey	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
7,543.0	30.00	266.60	7,526.6	-83.6	-93.5	373,429.49	566,438.40	32° 1' 35.367 N	104° 7' 8.223 W	
7,574.0	33.90	265.50	7,552.9	-84.7	-109.9	373,428.35	566,422.04	32° 1' 35.356 N	104° 7' 8.413 W	
7,606.0	36.80	266.40	7,579.0	-86.0	-128.3	373,427.05	566,403.58	32° 1' 35.343 N	104° 7' 8.627 W	
7,637.0	38.80	268.00	7,603.5	-87.0	-147.3	373,426.13	566,384.60	32° 1' 35.335 N	104° 7' 8.848 W	
7,668.0	42.10	269.20	7,627.1	-87.5	-167.4	373,425.65	566,364.50	32° 1' 35.330 N	104° 7' 9.081 W	
7,700.0	45.90	272.60	7,650.1	-87.1	-189.6	373,426.02	566,342.28	32° 1' 35.334 N	104° 7' 9.340 W	
7,732.0	49.90	275.20	7,671.6	-85.5	-213.3	373,427.65	566,318.60	32° 1' 35.351 N	104° 7' 9.615 W	
7,764.0	52.70	276.40	7,691.6	-82.9	-238.1	373,430.18	566,293.76	32° 1' 35.376 N	104° 7' 9.903 W	
7,796.0	54.60	276.60	7,710.5	-80.0	-263.7	373,433.09	566,268.16	32° 1' 35.406 N	104° 7' 10.200 W	
7,827.0	57.50	278.20	7,727.8	-76.7	-289.2	373,436.41	566,242.66	32° 1' 35.439 N	104° 7' 10.497 W	
7,880.0	65.86	276.59	7,753.0	-70.7	-335.5	373,442.39	566,196.43	32° 1' 35.499 N	104° 7' 11.033 W	
7,891.0	64.60	275.20	7,757.6	-69.7	-345.4	373,443.41	566,186.50	32° 1' 35.509 N	104° 7' 11.149 W	
7,923.0	68.40	273.10	7,770.3	-67.6	-374.7	373,445.53	566,157.24	32° 1' 35.531 N	104° 7' 11.489 W	
7,954.0	72.00	269.40	7,780.8	-66.9	-403.8	373,446.15	566,128.09	32° 1' 35.538 N	104° 7' 11.827 W	
7,986.0	75.30	266.40	7,789.8	-68.1	-434.5	373,445.02	566,097.41	32° 1' 35.527 N	104° 7' 12.184 W	
8,018.0	79.80	264.30	7,796.7	-70.6	-465.6	373,442.48	566,066.27	32° 1' 35.503 N	104° 7' 12.545 W	
8,050.0	84.60	264.10	7,801.1	-73.8	-497.2	373,439.28	566,034.74	32° 1' 35.472 N	104° 7' 12.912 W	
8,079.0	89.50	264.10	7,802.6	-76.8	-526.0	373,436.30	566,005.94	32° 1' 35.443 N	104° 7' 13.246 W	
8,111.0	92.20	265.00	7,802.1	-79.8	-557.8	373,433.27	565,974.09	32° 1' 35.413 N	104° 7' 13.616 W	
8,143.0	93.00	265.20	7,800.6	-82.6	-589.7	373,430.54	565,942.24	32° 1' 35.387 N	104° 7' 13.986 W	
8,198.0	93.50	266.00	7,797.5	-86.8	-644.4	373,426.32	565,887.50	32° 1' 35.346 N	104° 7' 14.622 W	
8,238.0	90.80	265.40	7,796.0	-89.8	-684.3	373,423.33	565,847.64	32° 1' 35.317 N	104° 7' 15.086 W	
8,334.0	93.30	265.50	7,792.6	-97.4	-779.9	373,415.72	565,752.01	32° 1' 35.244 N	104° 7' 16.197 W	
8,429.0	93.60	265.50	7,786.9	-104.8	-874.4	373,408.28	565,657.48	32° 1' 35.172 N	104° 7' 17.295 W	
8,525.0	91.00	266.30	7,783.0	-111.7	-970.1	373,401.42	565,561.81	32° 1' 35.106 N	104° 7' 18.406 W	
8,620.0	91.20	265.40	7,781.2	-118.6	-1,064.8	373,394.54	565,467.07	32° 1' 35.040 N	104° 7' 19.507 W	
8,715.0	91.60	265.20	7,778.9	-126.3	-1,159.5	373,386.76	565,372.42	32° 1' 34.965 N	104° 7' 20.607 W	
8,811.0	91.90	264.70	7,775.9	-134.8	-1,255.1	373,378.32	565,276.84	32° 1' 34.883 N	104° 7' 21.717 W	
8,906.0	89.70	265.90	7,774.6	-142.6	-1,349.7	373,370.53	565,182.18	32° 1' 34.808 N	104° 7' 22.817 W	
9,001.0	91.20	266.30	7,773.9	-149.0	-1,444.5	373,364.07	565,087.40	32° 1' 34.746 N	104° 7' 23.918 W	
9,097.0	91.40	265.50	7,771.7	-155.9	-1,540.2	373,357.21	564,991.67	32° 1' 34.680 N	104° 7' 25.030 W	
9,192.0	93.00	266.30	7,768.0	-162.7	-1,634.9	373,350.42	564,896.99	32° 1' 34.614 N	104° 7' 26.130 W	
9,288.0	93.00	266.10	7,763.0	-169.0	-1,730.6	373,344.07	564,801.33	32° 1' 34.553 N	104° 7' 27.242 W	
9,383.0	93.30	265.40	7,757.8	-176.1	-1,825.2	373,337.04	564,706.74	32° 1' 34.485 N	104° 7' 28.341 W	
9,478.0	92.00	266.60	7,753.4	-182.7	-1,919.8	373,330.42	564,612.07	32° 1' 34.422 N	104° 7' 29.440 W	
9,574.0	91.10	267.00	7,750.8	-188.0	-2,015.6	373,325.07	564,516.26	32° 1' 34.371 N	104° 7' 30.554 W	
9,669.0	91.60	266.80	7,748.6	-193.2	-2,110.5	373,319.93	564,421.43	32° 1' 34.321 N	104° 7' 31.655 W	
9,763.0	92.00	265.90	7,745.6	-199.2	-2,204.2	373,313.95	564,327.66	32° 1' 34.264 N	104° 7' 32.745 W	
9,859.0	90.40	265.50	7,743.6	-206.3	-2,299.9	373,306.75	564,231.96	32° 1' 34.195 N	104° 7' 33.856 W	
9,954.0	90.50	265.40	7,742.9	-213.9	-2,394.6	373,299.22	564,137.26	32° 1' 34.122 N	104° 7' 34.957 W	
10,050.0	91.70	265.90	7,741.0	-221.2	-2,490.3	373,291.94	564,041.56	32° 1' 34.052 N	104° 7' 36.069 W	
10,145.0	92.40	265.90	7,737.6	-228.0	-2,585.0	373,285.15	563,946.86	32° 1' 33.986 N	104° 7' 37.169 W	
10,240.0	92.80	265.20	7,733.3	-235.3	-2,679.7	373,277.78	563,852.25	32° 1' 33.915 N	104° 7' 38.268 W	
10,336.0	92.90	266.30	7,728.5	-242.4	-2,775.3	373,270.68	563,756.63	32° 1' 33.847 N	104° 7' 39.379 W	
10,432.0	92.10	267.30	7,724.4	-247.8	-2,871.0	373,265.33	563,660.87	32° 1' 33.795 N	104° 7' 40.491 W	
10,528.0	90.70	266.60	7,722.0	-252.9	-2,966.9	373,260.22	563,565.04	32° 1' 33.747 N	104° 7' 41.605 W	
10,623.0	90.80	266.40	7,720.8	-258.7	-3,061.7	373,254.42	563,470.23	32° 1' 33.691 N	104° 7' 42.706 W	
10,719.0	91.10	266.30	7,719.2	-264.8	-3,157.5	373,248.31	563,374.43	32° 1' 33.632 N	104° 7' 43.819 W	
10,814.0	91.50	266.10	7,717.0	-271.1	-3,252.2	373,242.02	563,279.67	32° 1' 33.572 N	104° 7' 44.920 W	
10,910.0	91.80	265.40	7,714.3	-278.2	-3,347.9	373,234.90	563,183.97	32° 1' 33.503 N	104° 7' 46.032 W	
11,005.0	92.00	265.00	7,711.1	-286.1	-3,442.5	373,226.96	563,089.36	32° 1' 33.426 N	104° 7' 47.131 W	
11,100.0	90.60	265.70	7,709.0	-293.8	-3,537.2	373,219.26	562,994.70	32° 1' 33.352 N	104° 7' 48.231 W	
11,195.0	90.60	265.40	7,708.0	-301.2	-3,631.9	373,211.89	562,899.99	32° 1' 33.281 N	104° 7' 49.331 W	
11,291.0	90.60	266.60	7,707.0	-307.9	-3,727.7	373,205.19	562,804.23	32° 1' 33.216 N	104° 7' 50.444 W	
11,386.0	91.30	268.00	7,705.4	-312.4	-3,822.6	373,200.72	562,709.35	32° 1' 33.174 N	104° 7' 51.546 W	



Stryker Directional
Survey Report - Geographic



Company:	CONCHO OIL AND GAS OPERATING, L.L.C.	Local Co-ordinate Reference:	Well Down South State Com #3H
Project:	EDDY COUNTY	TVD Reference:	Well @ 3048.0usft (SILVER OAK #7)
Site:	SECTION 19	MD Reference:	Well @ 3048.0usft (SILVER OAK #7)
Well:	Down South State Com #3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	As-Drilled Survey	Database:	EDM 5000.1 Single User Db

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,481.0	91.50	267.80	7,703.1	-315.9	-3,917.5	373,197.24	562,614.44	32° 1' 33.141 N	104° 7' 52.648 W
11,576.0	91.50	268.00	7,700.6	-319.3	-4,012.4	373,193.76	562,519.54	32° 1' 33.109 N	104° 7' 53.751 W
11,672.0	91.90	267.70	7,697.7	-322.9	-4,108.3	373,190.16	562,423.65	32° 1' 33.075 N	104° 7' 54.865 W
11,767.0	92.10	267.50	7,694.4	-326.9	-4,203.1	373,186.18	562,328.79	32° 1' 33.037 N	104° 7' 55.967 W
11,863.0	92.30	267.10	7,690.7	-331.4	-4,298.9	373,181.66	562,232.97	32° 1' 32.994 N	104° 7' 57.080 W
11,958.0	92.60	266.60	7,686.7	-336.6	-4,393.7	373,176.45	562,138.20	32° 1' 32.944 N	104° 7' 58.181 W
12,054.0	92.90	266.60	7,682.1	-342.3	-4,489.4	373,170.76	562,042.48	32° 1' 32.890 N	104° 7' 59.293 W
12,109.0	93.10	265.70	7,679.2	-346.0	-4,544.2	373,167.07	561,987.68	32° 1' 32.854 N	104° 7' 59.930 W
12,149.0	92.90	265.90	7,677.1	-349.0	-4,584.1	373,164.15	561,947.84	32° 1' 32.826 N	104° 8' 0.393 W
12,190.0	92.80	265.90	7,675.0	-351.9	-4,624.9	373,161.22	561,907.00	32° 1' 32.798 N	104° 8' 0.867 W
12,247.0	92.80	265.90	7,672.3	-355.9	-4,681.7	373,157.15	561,850.21	32° 1' 32.759 N	104° 8' 1.527 W

BHL Proj @ 12247 MD, 92.80°

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Hardline Boundary Brea	0.00	0.00	7,674.5	-352.7	-4,635.9	373,160.43	561,896.04	32° 1' 32.790 N	104° 8' 0.994 W

- hit/miss target
- Shape
- Point

survey misses target center by 11.0usft at 12190.0usft MD (7675.0 TVD, -351.9 N, -4624.9 E)

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,195.0	7,192.6	-76.9	-16.9	TI @ 7195 MD, 1.36°
12,247.0	7,672.3	-355.9	-4,681.7	BHL Proj @ 12247 MD, 92.80°

Checked By: _____ Approved By: _____ Date: _____



COMPANY: CONCHO OIL AND GAS OPERATING, L.L.C.
 WELL: Down South State Com #3H
 COUNTY: EDDY COUNTY
 DATUM: North American Datum 1983
 RIG: Silver Oak #7
 GRID CORRECTION: 7.50° E



OFFICE: 936.582.7296 PLANNING: 214.784.3778

Azimuths to Grid North
 True North: -0.11°
 Magnetic North: 7.50°
 Magnetic Field
 Strength: 48323.3snT
 Dip Angle: 59.90°
 Date: 1/25/2013
 Model: IGRF200510

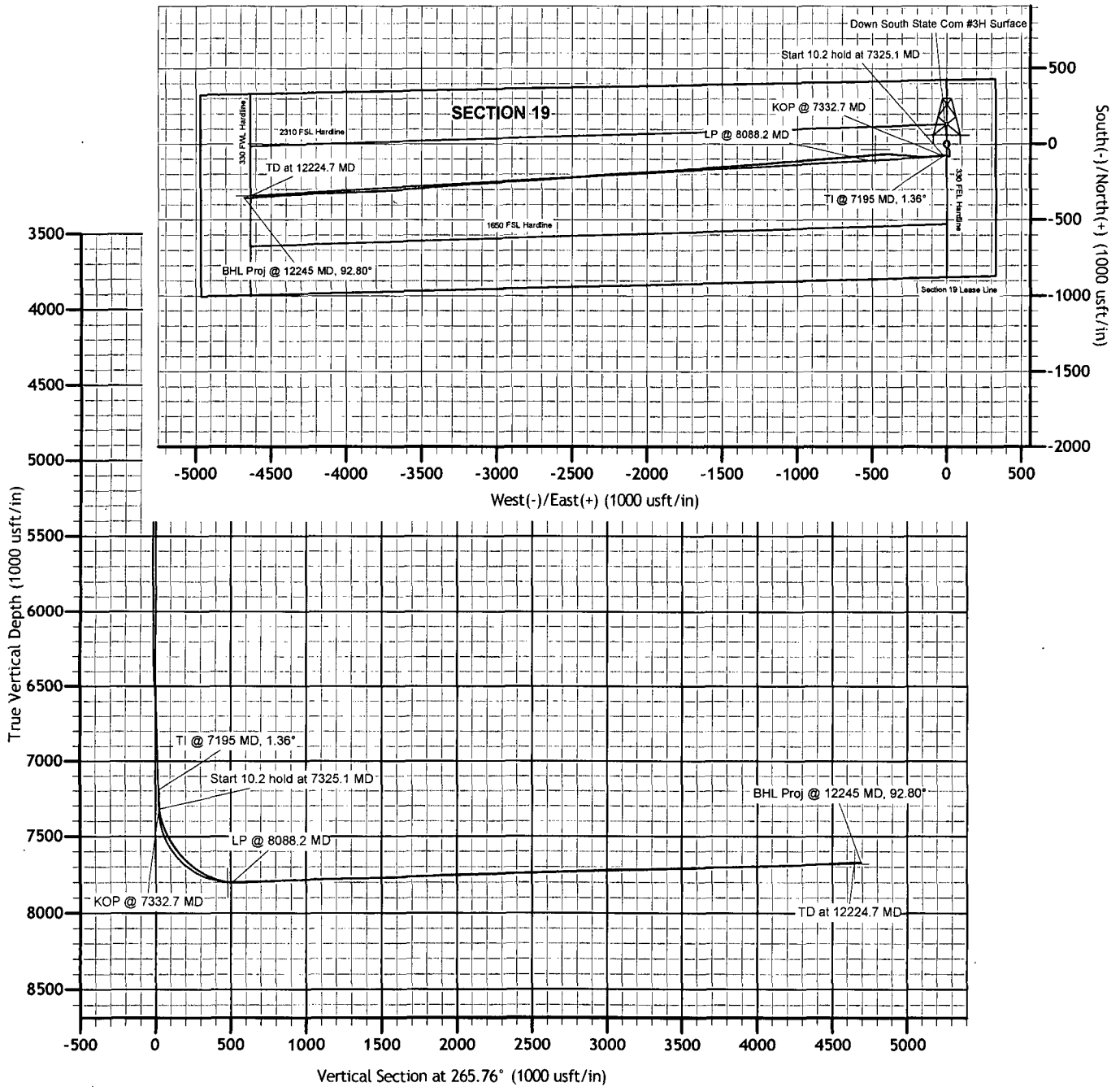
GEODETIC ZONE: New Mexico Eastern Zone
 Well @ 3048.0usft (SILVER OAK #7)
 GROUND ELEVATION: 3030.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	373570.17	607716.51	32° 1' 36.637 N	104° 7' 8.693 W

CREATED BY: BRANDON ESTES
 DATE: 15:49, February 18 2013
 PLAN: As-Drilled Survey

CRITICAL POINTS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
7192.6	7195.0	1.36	249.56	-76.9	-18.9	22.5	0.0	TI @ 7195 MD, 1.36°
7672.4	12245.0	92.80	265.90	-355.8	-4679.7	4693.2	4674.7	BHL Proj @ 12245 MD, 92.80°



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	
11863.00	92.30	267.10	7693.49	-332.65	-4298.35	4311.18	4311.20	265.57	.47
11958.00	92.60	266.60	7689.43	-337.87	-4393.11	4406.07	4406.09	265.60	.61
12054.00	92.90	266.60	7684.83	-343.55	-4488.84	4501.95	4501.96	265.62	.31
12149.00	92.90	265.90	7680.02	-349.76	-4583.51	4596.82	4596.84	265.64	.74
12190.00	92.80	265.90	7677.98	-352.69	-4624.35	4637.77	4637.78	265.64	.24

Projection to Total Depth									
12247.00	92.80	265.90	7675.20	-356.76	-4681.14	4694.71	4694.72	265.64	.00