DRILLING INC. Oil Well Drilling Contractor

Post Office Box 160 Artesia, New Mexico 88211-0160 Office (575) 748-8704 Fax (575) 748-8719

April 1, 2013

30-015-39641

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

Re: Patton 5 Fee # 8 H
Sec. 5, T-19-S, R-26-E
Eddy County, New Mexico

Attn: Jim Evans

The following is a Deviation Survey on the referenced well in Eddy County, New Mexico:

253' - 0.75°	831' - 0.75°
515' - 0.5°	1162' - 0.75°

Sincerely,

Gary W. Chappell
Contracts Manager

STATE OF NEW MEXICO)
)
COUNTY OF EDDY)

The foregoing was acknowledged before me this 1st day of April, 2013 by Gary W. Chappell.

NOTARY PUBLIC

Official Seal
BARBARA M. JOHNSON
Notary Public
State of New Mexico
My Commission Expires 1/20/16

Company: COG Operating LLC (Concho)
Lease/Well: Patton 5 Fee / No. 008H
Location: S5 T19s R26e
Rig Name: JW 4
State/County: New Mexico / Eddy
Latitude: 32.68, Longitude: -104.41
GRID North is 0.04 Degrees West of True North
VS-Azi: 0.00 Degrees

RKB : 15.1'

DRILLOG HA GYRO SURVEY CALCULATIONS
Filename: patton 5 fee #8h gyro survey.ut
Minimum Curvature Method
Report Date/Time: 4/4/2013 / 08:06

Vaughn Energy Services
Gardendale, Texas
432-563-5444
Survey Engineer: Dustin Wedel
Patton 5 Fee No. 008H / API 30-015-39641

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	0.42	168.51	100.00	-0.36	0.07	0.37	168.51	0.42
200.00	0.21	155.53	200.00	-0.89	0.22	0.92	165.92	0.22
300.00	0.22	152.84	300.00	-1.24	0.39	1.30	162.49	0.01
400.00	0.46	246.83	400.00	-1.57	0.11	1.57	175.89	0.52
500.00	0.58	248.69	499.99	-1.91	-0.73	2.04	200.82	0.12
600.00	0.68	248.75	599.99	-2.31	-1.75	2.90	217.23	0.10
700.00	0.51	268.22	699.98	-2.54	-2.76	3.75	227.35	0.26
800.00	0.41	268.30	799.98	-2.56	-3.56	4.39	234.27	0.10
900.00	0.35	217.34	899.97	-2.82	-4.11	4.98	235.56	0.33
1000.00	0.61	215.04	999.97	-3.50	-4.60	5.78	232.75	0.26
1100.00	0.66	240.97	1099.97	-4.22	-5.42	6.87	232.08	0.29
1200.00	0.64	201.26	1199.96	-5.02	-6.13	7.92	230.66	0.44
1300.00	0.58	189.40	1299.95	-6.04	-6.41	8.81	226.71	0.14
1400.00	0.66	210.56	1399.95	-7.03	-6.79	9.78	223.98	0.24
1500.00	0.51	212.95	1499.94	-7.91	-7.32	10.78	222.82	0.15
1600.00	0.67	221.63	1599.94	-8.72	-7.96	11.80	222.39	0.19
1700.00	0.87	226.69	1699.93	-9.68	-8.90	13.15	222.60	0.21
1800.00	1.08	236.28	1799.91	-10.73	-10.24	14.83	223.68	0.26

VES Survey Date: 03/29/2013

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	1.57	211.26	1899.89	-12.42	-11.74	17.09	223.38	0.74
2000.00	1.74	236.46	1999.85	-14.43	-13.71	19.91	223.55	0.74
2100.00	1.80	240.18	2099.80	-16.05	-16.35	22.91	225.52	0.13
2200.00	1.99	232.15	2199.74	-17.90	-19.09	26.17	226.83	0.32
2275.00	2.06	229.56	2274.70	-19.58	-21.14	28.81	227.20	0.15

VES Survey Date: 03/29/2013

CONCHO

COG Operating LLC

Eddy County, New Mexico (NAD 27 NME)
Patton 5 Fee #8H
Wellbore #1 / Job #1310359

Survey: Phoenix MWD Surveys

Phoenix Final Survey Report

05 April, 2013

PHOENIX
TECHNOLOGY SERVICES

Company:	COG Operating LLC	**Local Co-ordinate Reference:**	Well #8H
Project:	Eddy County, New Mexico (NAD 27 NME)	**TVD Reference:**	KB @ 3376.00usft (JW 4)
Site:	Patton 5 Fee	**MD Reference:**	KB @ 3376.00usft (JW 4)
Well:	#8H	**North Reference:**	Grid
Wellbore:	Wellbore #1 / Job #1310359	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys (JW 4)	**Database:**	GCR DB

Project Eddy County, New Mexico (NAD 27 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 Patton 5 Fee

Site Position:		**Northing:**	613,610.70 usft	**Latitude:**	32° 41' 12.805817 N
From:	Map	**Easting:**	475,920.20 usft	**Longitude:**	104° 24' 41.761820 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16"	**Grid Convergence:**	-0.04 °

Well #8H

Well Position	**+N/-S**	0.00 usft	**Northing:**	612,352.50 usft	**Latitude:**	32° 41' 0.356175 N
	+E/-W	0.00 usft	**Easting:**	476,064.80 usft	**Longitude:**	104° 24' 40.059037 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,363.00 usft

Wellbore Wellbore #1 / Job #1310359

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	03/26/13	7.79	60.42	48,622

Design Surveys (JW 4)

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	89.98

Survey Program **Date** 04/05/13

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	2,275.00	VES Gyro Surveys (Wellbore #1 / Job #13	VES-ISCWSA-GYRO-3	Biaxial Semi-Cont. Gyro
2,334.00	7,292.00	Phoenix MWD Surveys (Wellbore #1 / Job	MWD	MWD - Standard

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
2,275.00	2.06	229.56	2,274.70	-19.58	-21.14	-21.15	0.00
Tie In							
2,334.00	2.30	231.60	2,333.66	-21.00	-22.87	-22.88	0.43
First Phoenix MWD Survey							
2,365.00	1.20	158.90	2,364.64	-21.69	-23.25	-23.25	7.28
2,397.00	4.80	97.80	2,396.60	-22.19	-21.80	-21.81	13.59
2,428.00	8.80	91.40	2,427.38	-22.42	-18.14	-18.15	13.11
2,459.00	13.10	85.80	2,457.80	-22.22	-12.26	-12.27	14.27
2,490.00	16.60	83.60	2,487.76	-21.47	-4.36	-4.36	11.43
2,522.00	20.00	84.70	2,518.14	-20.46	5.64	5.63	10.68
2,553.00	23.30	86.60	2,546.95	-19.60	17.04	17.03	10.88

Company:	COG Operating LLC	**Local Co-ordinate Reference:**	Well #8H
Project:	Eddy County, New Mexico (NAD 27 NME)	**TVD Reference:**	KB @ 3376.00usft (JW 4)
Site:	Patton 5 Fee	**MD Reference:**	KB @ 3376.00usft (JW 4)
Well:	#8H	**North Reference:**	Grid
Wellbore:	Wellbore #1 / Job #1310359	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys (JW 4)	**Database:**	GCR DB

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
2,584.00	26.90	87.50	2,575.02	-18.93	30.17	30.16	11.68
2,615.00	29.90	90.00	2,602.29	-18.63	44.91	44.90	10.41
2,646.00	32.30	91.70	2,628.83	-18.87	60.91	60.91	8.24
2,678.00	34.50	92.20	2,655.54	-19.47	78.52	78.51	6.93
2,709.00	36.30	93.10	2,680.81	-20.31	96.46	96.45	6.04
2,740.00	38.70	93.50	2,705.40	-21.39	115.29	115.29	7.78
2,771.00	41.30	94.70	2,729.15	-22.82	135.17	135.16	8.75
2,802.00	43.90	94.30	2,751.97	-24.47	156.08	156.08	8.43
2,834.00	46.70	94.30	2,774.47	-26.17	178.76	178.75	8.75
2,865.00	49.30	92.80	2,795.21	-27.59	201.75	201.74	9.13
2,896.00	52.30	91.50	2,814.81	-28.49	225.76	225.75	10.21
2,927.00	54.50	90.10	2,833.29	-28.83	250.64	250.63	7.97
2,958.00	57.00	89.70	2,850.73	-28.79	276.26	276.25	8.13
2,989.00	59.70	89.30	2,867.00	-28.56	302.65	302.64	8.78
3,021.00	63.00	89.20	2,882.34	-28.19	330.72	330.71	10.32
3,052.00	67.00	89.50	2,895.44	-27.87	358.81	358.80	12.93
3,083.00	71.30	89.60	2,906.47	-27.64	387.77	387.76	13.87
3,114.00	74.60	89.70	2,915.56	-27.46	417.41	417.40	10.65
3,145.00	77.50	89.90	2,923.03	-27.36	447.49	447.48	9.38
3,176.00	81.10	89.90	2,928.78	-27.30	477.94	477.93	11.61
3,270.00	87.00	91.00	2,938.52	-28.04	571.39	571.38	6.38
3,364.00	88.60	90.50	2,942.13	-29.27	665.31	665.30	1.78
3,457.00	88.60	90.30	2,944.40	-29.92	758.28	758.27	0.21
3,551.00	88.10	89.20	2,947.11	-29.51	852.24	852.23	1.28
3,645.00	89.80	89.60	2,948.83	-28.53	946.22	946.21	1.86
3,738.00	90.00	89.90	2,949.00	-28.12	1,039.21	1,039.20	0.39
3,832.00	89.90	89.00	2,949.08	-27.22	1,133.21	1,133.20	0.96
3,926.00	90.10	88.50	2,949.08	-25.17	1,227.19	1,227.18	0.57
4,019.00	90.40	87.70	2,948.67	-22.09	1,320.13	1,320.13	0.92
4,113.00	89.70	89.40	2,948.59	-19.71	1,414.10	1,414.09	1.96
4,206.00	90.10	89.30	2,948.75	-18.65	1,507.09	1,507.09	0.44
4,300.00	90.10	88.60	2,948.59	-16.93	1,601.08	1,601.07	0.74
4,393.00	89.00	90.70	2,949.32	-16.36	1,694.06	1,694.06	2.55
4,487.00	89.00	90.50	2,950.96	-17.35	1,788.05	1,788.04	0.21
4,580.00	88.20	89.50	2,953.23	-17.35	1,881.02	1,881.01	1.38
4,674.00	89.90	90.30	2,954.79	-17.18	1,975.00	1,974.99	2.00
4,767.00	89.90	89.80	2,954.95	-17.26	2,068.00	2,067.99	0.54
4,861.00	89.30	89.20	2,955.61	-16.44	2,161.99	2,161.99	0.90
4,955.00	89.00	88.60	2,957.00	-14.64	2,255.96	2,255.96	0.71
5,048.00	89.00	90.70	2,958.63	-14.07	2,348.94	2,348.94	2.26
5,142.00	89.00	90.40	2,960.27	-14.97	2,442.92	2,442.92	0.32
5,235.00	89.00	89.80	2,961.89	-15.13	2,535.91	2,535.90	0.65
5,329.00	88.70	89.10	2,963.78	-14.23	2,629.88	2,629.88	0.81
5,422.00	88.30	88.50	2,966.21	-12.29	2,722.83	2,722.83	0.78

Company:	COG Operating LLC	**Local Co-ordinate Reference:**	Well #8H
Project:	Eddy County, New Mexico (NAD 27 NME)	**TVD Reference:**	KB @ 3376.00usft (JW 4)
Site:	Patton 5 Fee	**MD Reference:**	KB @ 3376.00usft (JW 4)
Well:	#8H	**North Reference:**	Grid
Wellbore:	Wellbore #1 / Job #13.10359	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys (JW 4)	**Database:**	GCR DB

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,516.00	90.30	89.20	2,967.36	-10.40	2,816.80	2,816.80	2.25
5,609.00	90.50	88.70	2,966.71	-8.70	2,909.78	2,909.78	0.58
5,703.00	88.50	90.30	2,967.53	-7.87	3,003.77	3,003.76	2.72
5,797.00	88.00	89.80	2,970.40	-7.96	3,097.72	3,097.72	0.75
5,891.00	89.70	89.90	2,972.29	-7.71	3,191.70	3,191.70	1.81
5,984.00	90.00	89.30	2,972.53	-7.06	3,284.70	3,284.69	0.72
6,078.00	89.70	88.50	2,972.78	-5.26	3,378.68	3,378.68	0.91
6,172.00	90.00	90.10	2,973.02	-4.11	3,472.67	3,472.67	1.73
6,266.00	90.10	89.90	2,972.94	-4.11	3,566.67	3,566.67	0.24
6,359.00	90.20	89.30	2,972.70	-3.46	3,659.66	3,659.66	0.65
6,453.00	90.20	88.50	2,972.37	-1.65	3,753.65	3,753.65	0.85
6,546.00	89.90	90.70	2,972.29	-1.01	3,846.64	3,846.64	2.39
6,640.00	89.90	90.30	2,972.45	-1.83	3,940.63	3,940.63	0.43
6,733.00	90.00	90.00	2,972.53	-2.07	4,033.63	4,033.63	0.34
6,827.00	90.30	89.60	2,972.29	-1.74	4,127.63	4,127.63	0.53
6,920.00	90.30	89.00	2,971.80	-0.61	4,220.62	4,220.62	0.65
7,014.00	88.20	89.10	2,973.03	0.95	4,314.60	4,314.60	2.24
7,107.00	87.90	88.40	2,976.20	2.98	4,407.52	4,407.52	0.82
7,201.00	87.50	88.10	2,979.97	5.85	4,501.40	4,501.40	0.53
Current MWD Survey							
7,292.00	87.50	88.10	2,983.94	8.86	4,592.26	4,592.27	0.00
Projection to Bit							

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,275.00	2,274.70	-19.58	-21.14	Tie In
2,334.00	2,333.66	-21.00	-22.87	First Phoenix MWD Survey
7,201.00	2,979.97	5.85	4,501.40	Current MWD Survey
7,292.00	2,983.94	8.86	4,592.26	Projection to Bit

Checked By: _____ Approved By: _____ Date: _____

CONCHO

Project: Eddy County, New Mexico (NAD 27 NME)
Site: Patton 5 Fee
Well: #8H
Wellbore: Wellbore #1 / Job #1310359
Design: Plan #3 03-30-13

PHOENIX TECHNOLOGY SERVICES

Azimuths to Grid North
True North: 0.04°
Magnetic North: 7.83°

Magnetic Field
Strength: 48621.8snT
Dip Angle: 60.42°
Date: 03/26/2013
Model: IGRF2010_14

WELL DETAILS

Ground Level: 3363.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	612352.50	476064.80	32° 41' 0.356175 N	104° 24' 40.059037 W

PROJECT DETAILS: Eddy County, New Mexico (NAD 27 NME)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001

System Datum: Mean Sea Level

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001

Local Origin: Well #8H, Grid North

Latitude: 32° 41' 0.356175 N
Longitude: 104° 24' 40.059037 W

Grid East: 476064.80
Grid North: 612352.50
Scale Factor: 1.000

Geomagnetic Model: IGRF2010_14
Sample Date: 26-Mar-13
Magnetic Declination: 7.79°
Dip Angle from Horizontal: 60.42°
Magnetic Field Strength: 48622

To convert a Magnetic Direction to a Grid Direction, Add 7.83°
To convert a Magnetic Direction to a True Direction, Add 7.79° East
To convert a True Direction to a Grid Direction, Add 0.04°

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSect	Target	Annotation
1	2275.00	2.06	229.56	2274.70	-19.58	-21.14	0.00	0.00	-21.15		Tie In, Start 134.82 hold at 2275.00 MD
2	2409.82	2.06	229.56	2409.43	-22.72	-24.83	0.00	0.00	-24.84		KOP Start DLS 11.00 TFO -140.01
3	3237.82	89.50	89.54	2944.49	-30.88	491.39	11.00	-140.01	491.38		LP Start 4101.39 hold at 3237.82 MD
4	7339.21	89.50	89.54	2980.20	1.70	4592.50	0.00	0.00	4592.50	PBH-LPatton 5 #8H	TD at 7339.21

SITE DETAILS: Patton 5 Fee

Site Centre Northing: 613610.70
Easting: 475920.20

Positional Uncertainty: 0.00
Convergence: -0.04
Local North: Grid

DESIGN TARGET DETAILS

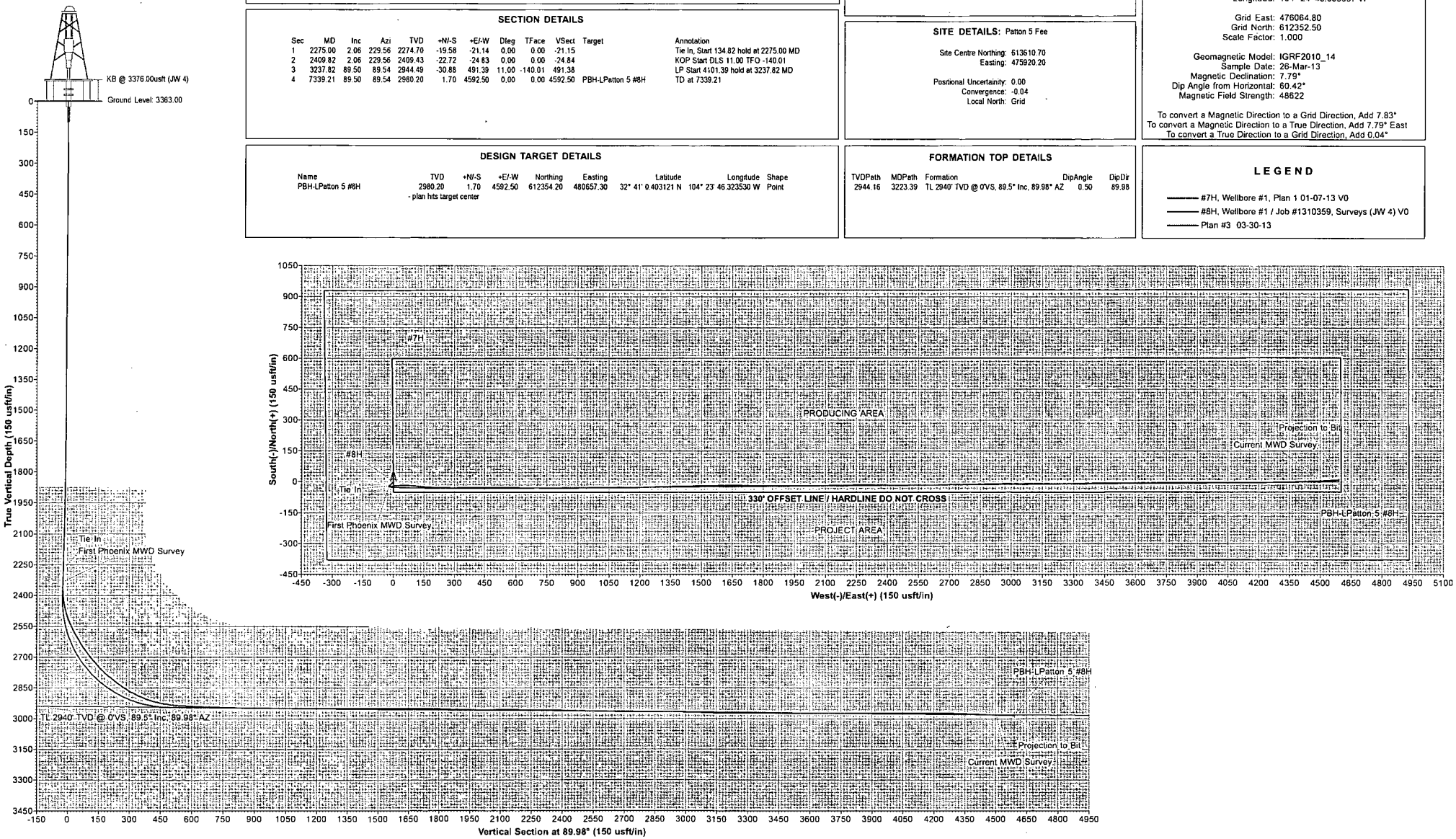
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBH-LPatton 5 #8H	2980.20 - plan hits target center	1.70	4592.50	612354.20	480657.30	32° 41' 0.403121 N	104° 23' 46.323530 W	Point

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
2944.16	3223.39	TL 2940' TVD @ 0'VS, 89.5° Inc, 89.98° AZ	0.50	89.98

LEGEND

- #7H, Wellbore #1, Plan 1 01-07-13 V0
- #8H, Wellbore #1 / Job #1310359, Surveys (JW 4) V0
- Plan #3 03-30-13



Created By: Julio Piña Date: 10:27, April 05 2013

PHOENIX TECHNOLOGY SERVICES

Survey Calculation Sheet

Company	COG Operating
Well	Patton 5 Fee # 8H
Field	Lakewood
Rig	JW4
Phoenix Rep.	Bob Dillon

Correction	7.85
Target TVD	2980.2
Target Az.	89.98
Tgt. Coor.	

QDT
CLT

Date	No.	DEPTH	INC.	AZM	C.L.	T.V.D.	V.S.	N/S	E/W	DLS	B./D.	BHA
Tie - In	0	2275	2.06	229.56	0	2274.70	-21.15	19.58 S	21.14 W	0.00		
30-Mar	1	2334	2.3	231.6	59	2333.66	-22.88	21.00 S	22.87 W	0.43	0.41	1
	2	2365	1.2	158.9	31	2364.65	-23.25	21.69 S	23.25 W	7.28	-3.55	
	3	2397	4.8	97.8	32	2396.60	-21.81	22.19 S	21.80 W	13.59	11.25	
	4	2428	8.8	91.4	31	2427.38	-18.15	22.42 S	18.14 W	13.11	12.90	
	5	2459	13.1	85.8	31	2457.81	-12.27	22.22 S	12.27 W	14.27	13.87	
	6	2490	16.6	83.6	31	2487.77	-4.37	21.47 S	4.36 W	11.43	11.29	
31-Mar	7	2522	20.0	84.7	32	2518.14	5.62	20.46 S	5.63 E	10.68	10.63	
	8	2553	23.3	86.6	31	2546.95	17.02	19.60 S	17.03 E	10.88	10.65	
	9	2584	26.9	87.5	31	2575.02	30.15	18.93 S	30.16 E	11.68	11.61	
	10	2615	29.9	90.0	31	2602.29	44.89	18.63 S	44.89 E	10.41	9.68	
	11	2646	32.3	91.7	31	2628.83	60.89	18.87 S	60.90 E	8.24	7.74	
	12	2678	34.5	92.2	32	2655.54	78.50	19.47 S	78.50 E	6.93	6.88	
	13	2709	36.3	93.1	31	2680.81	96.43	20.31 S	96.44 E	6.04	5.81	
	14	2740	38.7	93.5	31	2705.41	115.27	21.39 S	115.28 E	7.78	7.74	
	15	2771	41.3	94.7	31	2729.15	135.14	22.82 S	135.15 E	8.75	8.39	
	16	2802	43.9	94.3	31	2751.97	156.05	24.47 S	156.06 E	8.43	8.39	
	17	2834	46.7	94.3	32	2774.47	178.73	26.17 S	178.74 E	8.75	8.75	
	18	2865	49.3	92.8	31	2795.22	201.72	27.59 S	201.73 E	9.13	8.39	
	19	2896	52.3	91.5	31	2814.81	225.72	28.49 S	225.73 E	10.21	9.68	
	20	2927	54.5	90.1	31	2833.29	250.60	28.83 S	250.61 E	7.97	7.10	
	21	2958	57.0	89.7	31	2850.74	276.22	28.79 S	276.23 E	8.13	8.06	
	22	2989	59.7	89.3	31	2867.00	302.60	28.56 S	302.61 E	8.78	8.71	
	23	3021	63.0	89.2	32	2882.34	330.67	28.19 S	330.68 E	10.32	10.31	
	24	3052	67.0	89.5	31	2895.44	358.76	27.87 S	358.77 E	12.93	12.90	
	25	3083	71.3	89.6	31	2906.47	387.71	27.64 S	387.72 E	13.87	13.87	
	26	3114	74.6	89.7	31	2915.56	417.34	27.46 S	417.35 E	10.65	10.65	
	27	3145	77.5	89.9	31	2923.03	447.42	27.36 S	447.43 E	9.38	9.35	
	28	3176	81.1	89.9	31	2928.79	477.87	27.30 S	477.88 E	11.61	11.61	
1-Apr	29	3270	87.0	91.0	94	2938.53	571.27	28.04 S	571.28 E	6.38	6.28	
	30	3364	88.6	90.5	94	2942.13	665.19	29.27 S	665.20 E	1.78	1.70	
	31	3457	88.6	90.3	93	2944.41	758.16	29.92 S	758.17 E	0.21	0.00	
	32	3551	88.1	89.2	94	2947.11	852.12	29.51 S	852.13 E	1.28	-0.53	2
	33	3645	89.8	89.6	94	2948.84	946.09	28.53 S	946.10 E	1.86	1.81	
	34	3738	90.0	89.9	93	2949.00	1039.09	28.12 S	1039.10 E	0.39	0.22	
	35	3832	89.9	89.0	94	2949.08	1133.08	27.22 S	1133.09 E	0.96	-0.11	
	36	3926	90.1	88.5	94	2949.08	1227.06	25.17 S	1227.07 E	0.57	0.21	
	37	4019	90.4	87.7	93	2948.67	1320.01	22.09 S	1320.01 E	0.92	0.32	
	38	4113	89.7	89.4	94	2948.59	1413.97	19.71 S	1413.98 E	1.96	-0.74	
2-Apr	39	4206	90.1	89.3	93	2948.75	1506.96	18.65 S	1506.97 E	0.44	0.43	
	40	4300	90.1	88.6	94	2948.59	1600.95	16.93 S	1600.95 E	0.74	0.00	
	41	4393	89.0	90.7	93	2949.32	1693.93	16.36 S	1693.93 E	2.55	-1.18	3
	42	4487	89.0	90.5	94	2950.96	1787.91	17.35 S	1787.92 E	0.21	0.00	
	43	4580	88.2	89.5	93	2953.23	1880.88	17.35 S	1880.88 E	1.38	-0.86	

3-Apr	44	4674	89.9	90.3	94	2954.79	1974.86	17.18 S	1974.86 E	2.00	1.81	
	45	4767	89.9	89.8	93	2954.95	2067.86	17.26 S	2067.86 E	0.54	0.00	
	46	4861	89.3	89.2	94	2955.61	2161.85	16.44 S	2161.85 E	0.90	-0.64	
	47	4955	89.0	88.6	94	2957.01	2255.82	14.64 S	2255.82 E	0.71	-0.32	
	48	5048	89.0	90.7	93	2958.63	2348.79	14.07 S	2348.80 E	2.26	0.00	
	49	5142	89.0	90.4	94	2960.27	2442.77	14.97 S	2442.78 E	0.32	0.00	
	50	5235	89.0	89.8	93	2961.89	2535.76	15.13 S	2535.76 E	0.65	0.00	
	51	5329	88.7	89.1	94	2963.78	2629.73	14.23 S	2629.74 E	0.81	-0.32	
	52	5422	88.3	88.5	93	2966.21	2722.68	12.29 S	2722.69 E	0.78	-0.43	
	53	5516	90.3	89.2	94	2967.36	2816.65	10.40 S	2816.65 E	2.25	2.13	
	54	5609	90.5	88.7	93	2966.71	2909.63	8.70 S	2909.63 E	0.58	0.22	
	55	5703	88.5	90.3	94	2967.53	3003.61	7.87 S	3003.61 E	2.72	-2.13	
	56	5797	88.0	89.8	94	2970.40	3097.56	7.96 S	3097.56 E	0.75	-0.53	
4-Apr	57	5891	89.7	89.9	94	2972.29	3191.53	7.71 S	3191.54 E	1.81	1.81	
	58	5984	90.0	89.3	93	2972.53	3284.53	7.06 S	3284.53 E	0.72	0.32	
	59	6078	89.7	88.5	94	2972.78	3378.51	5.26 S	3378.51 E	0.91	-0.32	
	60	6172	90.0	90.1	94	2973.03	3472.50	4.11 S	3472.50 E	1.73	0.32	
	61	6266	90.1	89.9	94	2972.94	3566.50	4.11 S	3566.50 E	0.24	0.11	
	62	6359	90.2	89.3	93	2972.70	3659.50	3.46 S	3659.50 E	0.65	0.11	
	63	6453	90.2	88.5	94	2972.37	3753.48	1.65 S	3753.48 E	0.85	0.00	
	64	6546	89.9	90.7	93	2972.29	3846.46	1.01 S	3846.46 E	2.39	-0.32	
	65	6640	89.9	90.3	94	2972.45	3940.46	1.83 S	3940.46 E	0.43	0.00	
	66	6733	90.0	90.0	93	2972.54	4033.46	2.07 S	4033.46 E	0.34	0.11	
	67	6827	90.3	89.6	94	2972.29	4127.46	1.74 S	4127.46 E	0.53	0.32	
	68	6920	90.3	89.0	93	2971.80	4220.45	0.61 S	4220.45 E	0.65	0.00	
	69	7014	88.2	89.1	94	2973.03	4314.42	0.95 N	4314.42 E	2.24	-2.23	
	70	7107	87.9	88.4	93	2976.20	4407.34	2.98 N	4407.34 E	0.82	-0.32	
5-Apr	71	7201	87.5	88.1	94	2976.20	0.00	2.98 N	4454.27 E	0.00	-0.43	
	PTB	7291	87.5	88.1	90	2976.20	0.00	2.98 N	4499.20 E	0.00	0.00	