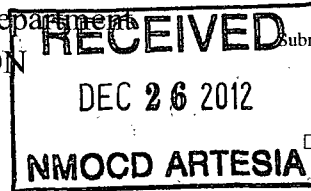


DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505



Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015- 40924	Pool Code 96610	Pool Name Empire; Glorieta Yeso East
Property Code 39603	Property Name CADILLAC 15 STATE	Well Number 2H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3577'

Surface Location

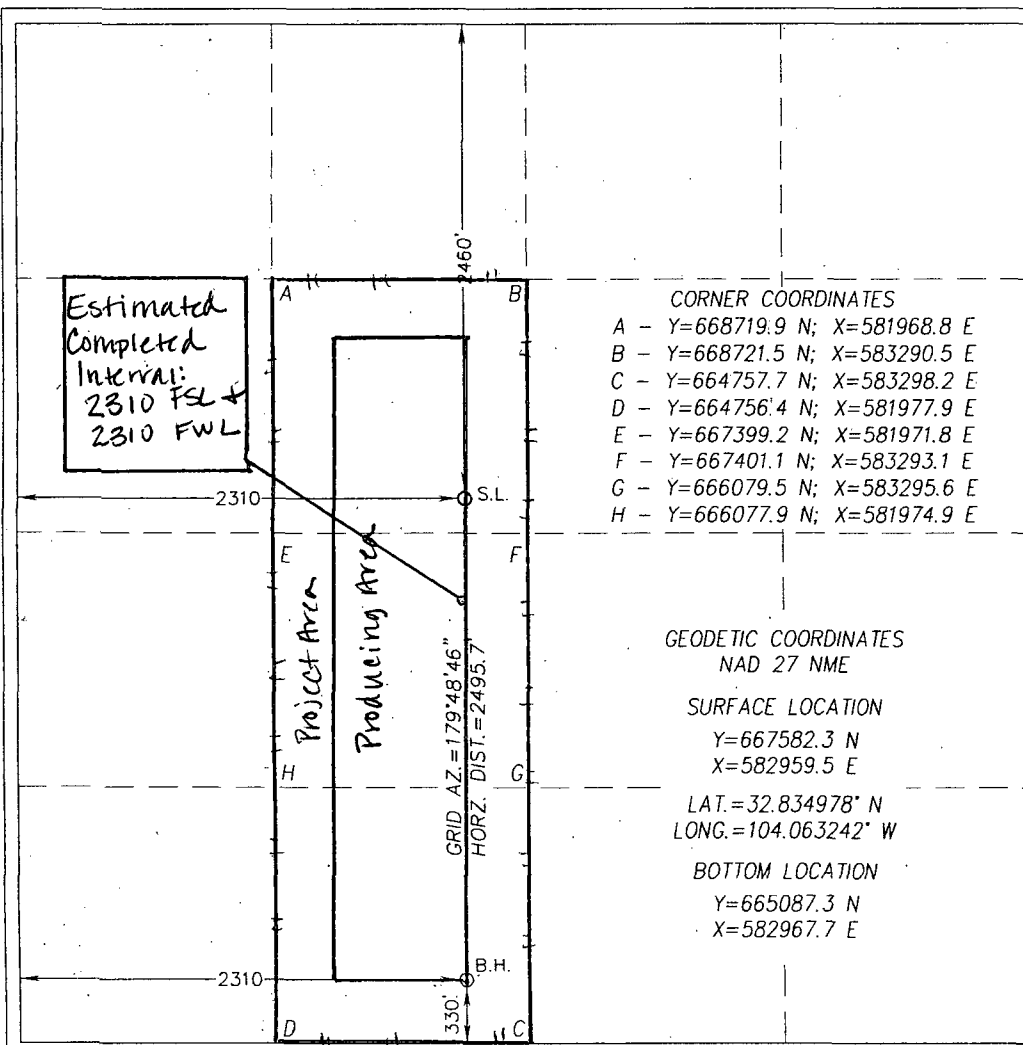
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	15	17-S	29-E		2460	NORTH	2310	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	15	17-S	29-E		330	SOUTH	2310	WEST	EDDY

Dedicated Acres 120	Joint or Infill	Consolidation Code	Order No.
------------------------	-----------------	--------------------	-----------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature
12-20-12
Date
Kelly J. Holly
Printed Name
kholly@concho.com
E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

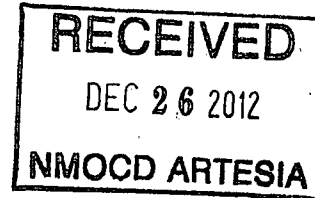
AUGUST 15, 2012

Date of Survey
Signature & Seal of Professional Surveyor:

Certificate Number
Ronald J. Eidson 12641
BKL Rel. W.O. 12.13.2012 JWSC W.O.: 12.13.2064



Weatherford®



Drilling Services

Proposal



COG OPERATING LLC.

CADILLAC 15 STATE #2H

EDDY CO, NM

WELL FILE: **LOWER LATERAL PLAN 1**
UPPER LATERAL PLAN 1

SHL 2460 FNL 2310 FWL

PP 2310 FSL 2310 FWL

BHL 330 FSL 2310 FWL

DECEMBER 14, 2012

Weatherford International, Ltd.

P.O. Box 61028

Midland, TX 79711 USA

+1.432.561.8892 Main

+1.432.561.8895 Fax

www.weatherford.com

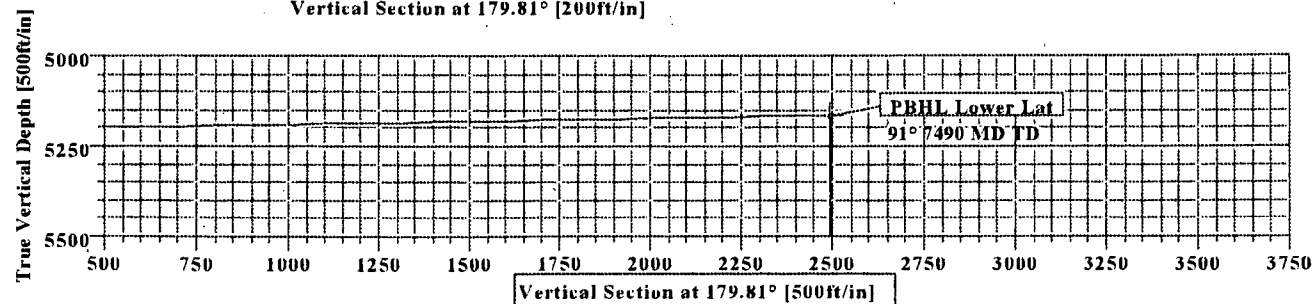
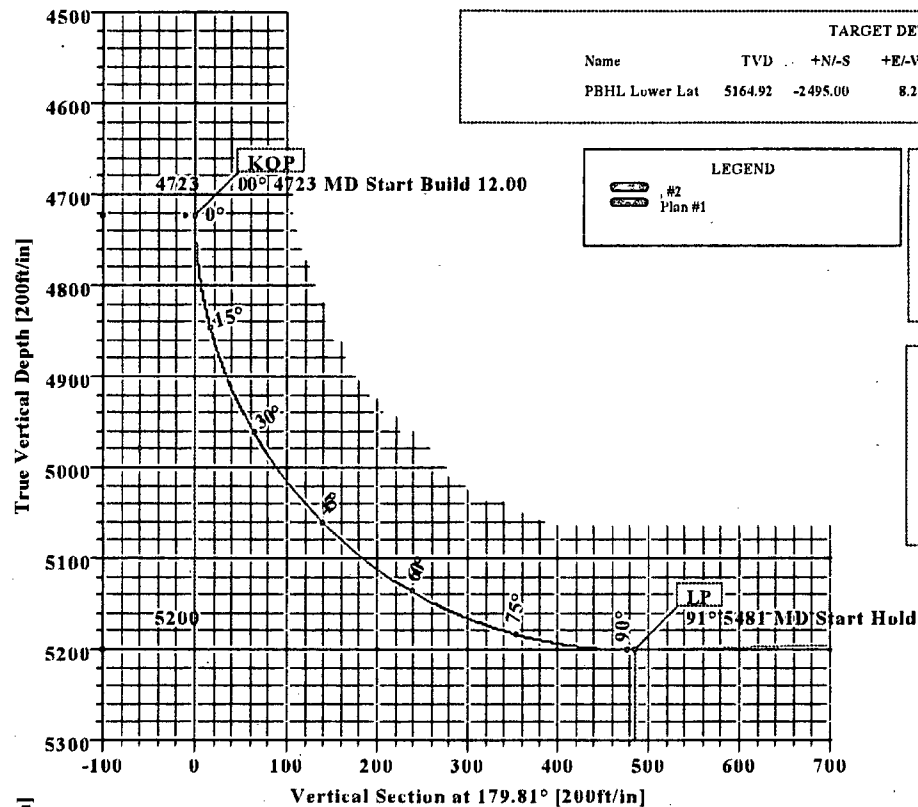


Cadillac 15 State #2H Eddy Co., NM

Lower Lateral



KB ELEV: 3595.5
GL ELEV: 3577



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	179.81	0.00	0.00	0.00	0.00	0.00	0.00	
2	4722.61	0.00	179.81	4722.61	0.00	0.00	0.00	0.00	0.00	
3	5480.95	91.00	179.81	5200.00	-485.80	1.60	12.00	179.81	485.80	
4	7490.47	91.00	179.81	5164.92	-2495.00	8.20	0.00	0.00	2495.01	PBHL Lower Lat

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
#2	0.00	0.00	667582.30	582959.50	32°50'05.922N	104°03'47.670W	N/A

TARGET DETAILS

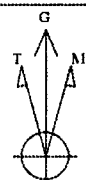
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL Lower Lat	5164.92	-2495.00	8.20	665087.30	582967.70	Point

LEGEND

— #2
— Plan #1

SITE DETAILS

Cadillac 15 State #2H
Site Centre Northing: 667582.30
Easting: 582959.50
Ground Level: 3577.00
Positional Uncertainty: 0.00
Convergence: 0.15



Asimuths to Grid North
True North: -0.15°
Magnetic North: 7.50°
Magnetic Field
Strength: 48780nT
Dip Angle: 60.62°
Date: 3/15/2013
Model: IGRF2010
Total Correction to Grid North: 7.50°



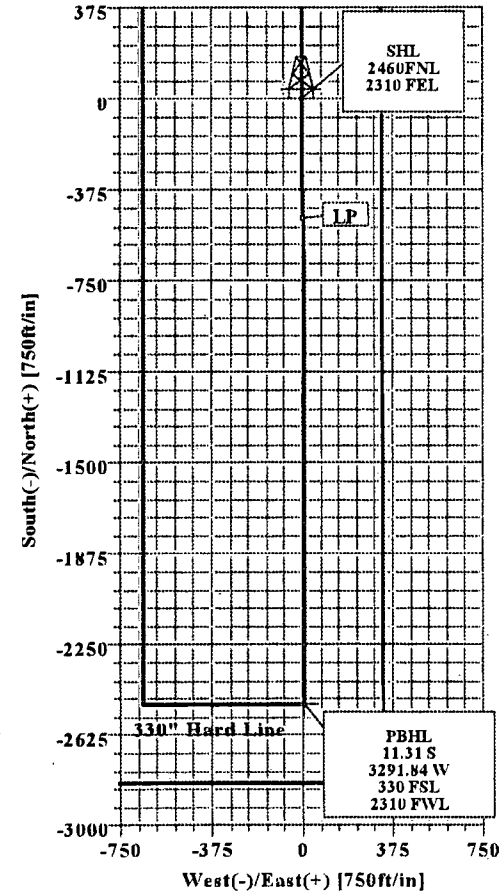
Weatherford

FIELD DETAILS

Eddy Co, NM (Nad27)

Geodetic System: US State Plane Coordinate System 1927
Ellipsoid: NAD27 (Clarke 1866)
Zone: New Mexico, Eastern Zone
Magnetic Model: IGRF2010

System Datum: Mean Sea Level
Local North: Grid North



Plan: Plan #1 (#2/Lower Lat)

Created By: Russell W. Joyner

Date: 12/13/2012



Company: COG Operating Field: Eddy Co, NM (Nad27) Site: Cadillac 15 State #2H Well: #2 Wellpath: Lower Lat		Date: 12/13/2012 Time: 13:00:58 Page: 1 Co-ordinate(NE) Reference: Well: #2, Grid North Vertical (TVD) Reference: SITE 3595.5 Section (VS) Reference: Well: (0.00N,0.00E,179.81Azi) Survey Calculation Method: Minimum Curvature Db: Sybase																																																																																																																																																																																																														
Plan: Plan #1 Principal: Yes		Date Composed: 12/13/2012 Version: 1 Tied-to: From Surface																																																																																																																																																																																																														
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Site: Cadillac 15 State #2H Site Position: Northing: 667582.30 ft Latitude: 32 50 5.922 N From: Map Easting: 582959.50 ft Longitude: 104 3 47.670 W Position Uncertainty: 0.00 ft North Reference: Grid Ground Level: 3577.00 ft Grid Convergence: 0.15 deg																																																																																																																																																																																																																
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Plan Section Information <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>MD ft</th> <th>Incl deg</th> <th>Azim deg</th> <th>TVD ft</th> <th>+N/-S ft</th> <th>+E/-W ft</th> <th>DLS deg/100ft</th> <th>Build deg/100ft</th> <th>Turn deg/100ft</th> <th>TFO deg</th> <th>Target</th> </tr> </thead> <tbody> <tr> <td>0.00</td> <td>0.00</td> <td>179.81</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td></td> </tr> <tr> <td>4722.61</td> <td>0.00</td> <td>179.81</td> <td>4722.61</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td></td> </tr> <tr> <td>5480.95</td> <td>91.00</td> <td>179.81</td> <td>5200.00</td> <td>-485.80</td> <td>1.60</td> <td>12.00</td> <td>12.00</td> <td>0.00</td> <td>179.81</td> <td></td> </tr> <tr> <td>7490.47</td> <td>91.00</td> <td>179.81</td> <td>5164.92</td> <td>-2495.00</td> <td>8.20</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>PBHL Lower Lat</td> </tr> </tbody> </table>				MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target	0.00	0.00	179.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00		4722.61	0.00	179.81	4722.61	0.00	0.00	0.00	0.00	0.00	0.00		5480.95	91.00	179.81	5200.00	-485.80	1.60	12.00	12.00	0.00	179.81		7490.47	91.00	179.81	5164.92	-2495.00	8.20	0.00	0.00	0.00	0.00	PBHL Lower Lat																																																																																																																																																						
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Company: COG Operating Field: Eddy Co. NM (Nad27) Site: Cadillac 15 State #2H Well: #2 Wellpath: Lower Lat	Date: 12/13/2012 Time: 13:00:58 Page: 2 Co-ordinate(NE) Reference: Well #2, Grid North Vertical (TVD) Reference: SITE 3595.5 Section (VS) Reference: Well (0.00N,0.00E,179.81Azi) Survey Calculation Method: Minimum Curvature Db: Sybase
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Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
5100.00	45.29	179.81	5061.91	-141.54	0.47	141.54	12.00	667440.76	582959.97	
5125.00	48.29	179.81	5079.03	-159.76	0.53	159.76	12.00	667422.54	582960.03	
5150.00	51.29	179.81	5095.17	-178.85	0.59	178.85	12.00	667403.45	582960.09	
5175.00	54.29	179.81	5110.29	-198.75	0.65	198.76	12.00	667383.55	582960.15	
5200.00	57.29	179.81	5124.34	-219.43	0.72	219.43	12.00	667362.87	582960.22	
5225.00	60.29	179.81	5137.30	-240.80	0.79	240.81	12.00	667341.50	582960.29	
5250.00	63.29	179.81	5149.11	-262.83	0.86	262.83	12.00	667319.47	582960.36	
5275.00	66.29	179.81	5159.76	-285.45	0.94	285.45	12.00	667296.85	582960.44	
5300.00	69.29	179.81	5169.21	-308.59	1.01	308.59	12.00	667273.71	582960.51	
5325.00	72.29	179.81	5177.44	-332.19	1.09	332.19	12.00	667250.11	582960.59	
5350.00	75.29	179.81	5184.42	-356.20	1.17	356.20	12.00	667226.10	582960.67	
5375.00	78.29	179.81	5190.13	-380.53	1.25	380.53	12.00	667201.77	582960.75	
5400.00	81.29	179.81	5194.56	-405.13	1.33	405.13	12.00	667177.17	582960.83	
5425.00	84.29	179.81	5197.70	-429.93	1.41	429.93	12.00	667152.37	582960.91	
5450.00	87.29	179.81	5199.54	-454.86	1.49	454.86	12.00	667127.44	582960.99	
5475.00	90.29	179.81	5200.07	-479.85	1.58	479.85	12.00	667102.45	582961.08	
5480.95	91.00	179.81	5200.00	-485.80	1.60	485.80	12.00	667096.50	582961.10	LP
5500.00	91.00	179.81	5199.67	-504.85	1.66	504.85	0.00	667077.45	582961.16	
5600.00	91.00	179.81	5197.92	-604.83	1.99	604.84	0.00	666977.47	582961.49	
5700.00	91.00	179.81	5196.18	-704.82	2.32	704.82	0.00	666877.48	582961.82	
5800.00	91.00	179.81	5194.43	-804.80	2.65	804.81	0.00	666777.50	582962.15	
5900.00	91.00	179.81	5192.69	-904.79	2.97	904.79	0.00	666677.51	582962.47	
6000.00	91.00	179.81	5190.94	-1004.77	3.30	1004.78	0.00	666577.53	582962.80	
6100.00	91.00	179.81	5189.19	-1104.75	3.63	1104.76	0.00	666477.55	582963.13	
6200.00	91.00	179.81	5187.45	-1204.74	3.96	1204.74	0.00	666377.56	582963.46	
6300.00	91.00	179.81	5185.70	-1304.72	4.29	1304.73	0.00	666277.58	582963.79	
6400.00	91.00	179.81	5183.96	-1404.71	4.62	1404.71	0.00	666177.59	582964.12	
6500.00	91.00	179.81	5182.21	-1504.69	4.95	1504.70	0.00	666077.61	582964.45	
6600.00	91.00	179.81	5180.47	-1604.68	5.27	1604.68	0.00	665977.62	582964.77	
6700.00	91.00	179.81	5178.72	-1704.66	5.60	1704.67	0.00	665877.64	582965.10	
6800.00	91.00	179.81	5176.97	-1804.64	5.93	1804.65	0.00	665777.66	582965.43	
6900.00	91.00	179.81	5175.23	-1904.63	6.26	1904.64	0.00	665677.67	582965.76	
7000.00	91.00	179.81	5173.48	-2004.61	6.59	2004.62	0.00	665577.69	582966.09	
7100.00	91.00	179.81	5171.74	-2104.60	6.92	2104.61	0.00	665477.70	582966.42	
7200.00	91.00	179.81	5169.99	-2204.58	7.25	2204.59	0.00	665377.72	582966.75	
7300.00	91.00	179.81	5168.25	-2304.56	7.57	2304.58	0.00	665277.74	582967.07	
7400.00	91.00	179.81	5166.50	-2404.55	7.90	2404.56	0.00	665177.75	582967.40	
7490.47	91.00	179.81	5164.92	-2495.00	8.20	2495.01	0.00	665087.30	582967.70	PBHL Lower Lat

Targets

Name	Description	TVD	+N/S	+E/W	Map Northing	Map Easting	Latitude	Longitude
Dip	Dir	ft	ft	ft	ft	ft	Deg Min Sec	Deg Min Sec
PBHL Lower Lat		5164.92	-2495.00	8.20	665087.30	582967.70	32 49 41.233 N	104 3 47.649 W

Casing Points

MD	TVD	Diameter	Hole Size	Name



Weatherford

WFT Plan Report - X & Y's



Weatherford

Company: COG Operating	Date: 12/13/2012	Time: 13:00:58	Page: 3
Field: Eddy Co. NM. (Nad27)	Co-ordinate(NE) Reference: Well: #2 Grid North		
Site: Cadillac 15 State #2H	Vertical (TVD) Reference: SITE 3595.5		
Well: #2	Section (VS) Reference: Well (0.00N:0.00E:179.81Azi)		
Wellpath: Lower Lat	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Annotation

MD ft	TVD ft	
4722.61	4722.61	KOP
5480.95	5200.00	LP
7490.46	5164.92	PBHL Lower Lat

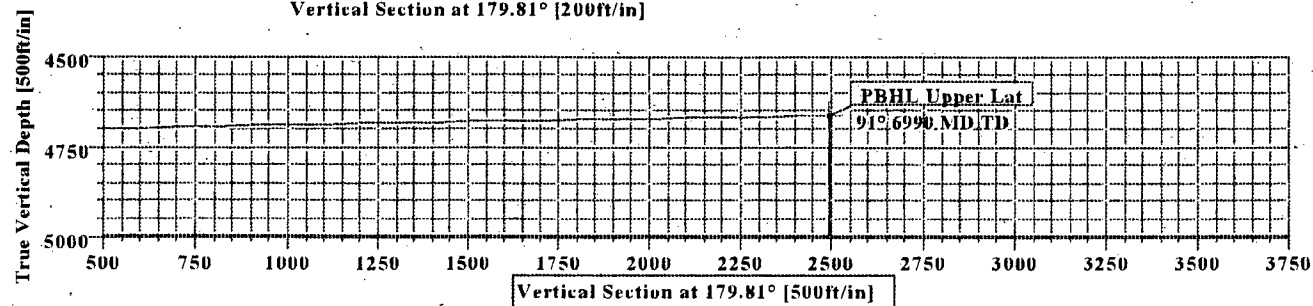
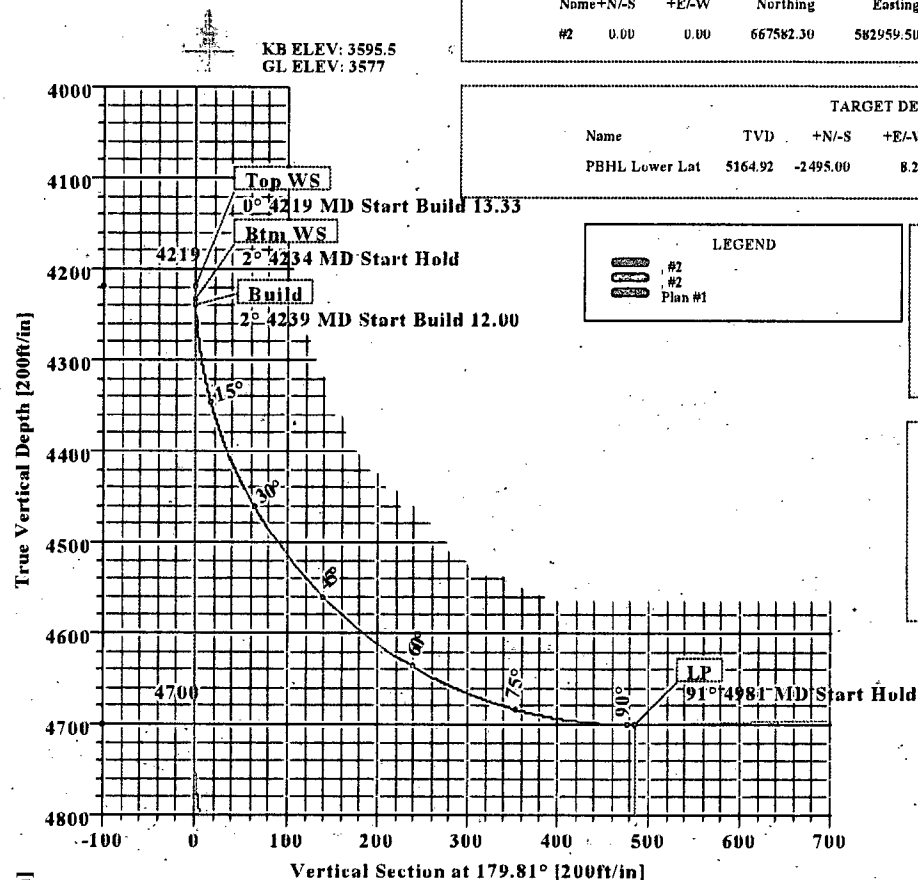
Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction



Cadillac 15 State #2H
Eddy Co., NM

Upper Lateral



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4219.27	0.00	0.00	4219.27	0.00	0.00	0.00	0.00	0.00	
3	4234.27	2.00	179.81	4234.27	-0.26	0.00	13.33	179.81	0.26	
4	4239.27	2.00	179.81	4239.26	-0.44	0.00	0.00	0.00	0.44	
5	4980.94	91.00	179.81	4700.00	-485.94	1.60	12.00	0.00	485.95	
6	6990.32	91.00	179.81	4664.92	-2495.00	8.20	0.00	0.00	2495.01	PBHL Upper Lat

WELL DETAILS

Name+N-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot	
#2	0.00	0.00	667582.30	582959.50	32°50'05.922N	104°03'47.670W	N/A

TARGET DETAILS

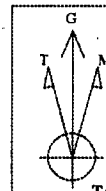
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL Lower Lat	5164.92	-2495.00	8.20	665087.30	582967.70	Point

LEGEND

○	#2
○	#2
○	Plan #1

SITE DETAILS

Cadillac 15 State #2H
Site Centre Northing: 667582.30
Easting: 582959.50
Ground Level: 3577.00
Positional Uncertainty: 0.00
Convergence: 0.15



Azimuths to Grid North
True North: -0.15°
Magnetic North: 7.50°

Magnetic Field
Strength: 48780nT
Dip Angle: 60.62°
Date: 3/15/2013
Model: IGRF2010

Total Correction to Grid North: 7.50°



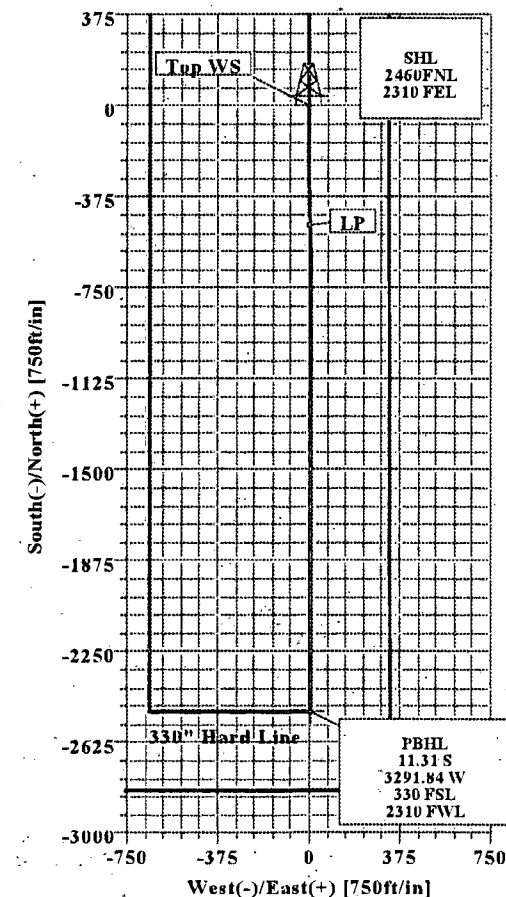
Weatherford

FIELD DETAILS

Eddy Co, NM (Nad27)

Geodetic System: US State Plane Coordinate System 1927
Ellipsoid: NAD27 (Clarke 1866)
Zone: New Mexico, Eastern Zone
Magnetic Model: IGRF2010

System Datum: Mean Sea Level
Local North: Grid North



Plan: Plan #1 (#2/Upper Lat)

Created By: Russell W. Joyner

Date: 12/13/2012



Weatherford

WFT Plan Report - X & Y's



Weatherford

Company: COG Operating	Date: 12/13/2012	Time: 13:28:12	Page: 1
Field: Eddy Co, NM (Nad27)	Co-ordinate(N/E) Reference: Well #2 Grid North		
Site: Cadillac 15 State #2H	Vertical (TVD) Reference: SITE 3595.5		
Well: #2	Section (VS) Reference: Well (0.00N/0.00E/179.81Azi)		
Wellpath: Upper Lat	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Plan: Plan #1	Date Composed: 12/13/2012
Principal: Yes	Version: 1
	Tied-to: From Surface

Field: Eddy Co, NM (Nad27)	
Map System: US State Plane Coordinate System 1927	Map Zone: New Mexico, Eastern Zone
Geo Datum: NAD27 (Clarke 1866)	Coordinate System: Well Centre
Sys Datum: Mean Sea Level	Geomagnetic Model: IGRF2010

Site: Cadillac 15 State #2H									
Site Position:		Northing:		667582.30 ft		Latitude:		32 50 5.922 N	
From: Map		Easting:		582959.50 ft		Longitude:		104 3 47.670 W	
Position Uncertainty:		0.00 ft				North Reference:		Grid	
Ground Level:		3577.00 ft				Grid Convergence:		0.15 deg	

Well: #2	Slot Name:						
Well Position:	+N/-S	0.00 ft	Northings:	667582.30 ft	Latitude:	32 50	5.922 N
	+E/-W	0.00 ft	Easting:	582959.50 ft	Longitude:	104 3	47.670 W
Position Uncertainty:		0.00 ft					

Wellpath: Upper Lat		Drilled From:	Lower Lat
Current Datum:	SITE	Tie-on Depth:	0.00 ft
Magnetic Data:	3/15/2013	Above System Datum:	Mean Sea Level
Field Strength:	48780 nT	Declination:	7.65 deg
Vertical Section: Depth From (TVD)	+N/-S	Mag Dip Angle:	60.62 deg
ft	ft	+E/-W	Direction
	ft	ft	deg
0.00	0.00	0.00	179.81

Plan Section Information

MD	Incl	Azim	TVD	+N-S	+E-W	DLS	Build	Turn	TFO	Target
ft	deg	deg	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4219.27	0.00	0.00	4219.27	0.00	0.00	0.00	0.00	0.00	0.00	
4234.27	2.00	179.81	4234.27	-0.26	0.00	13.33	13.33	0.00	179.81	
4239.27	2.00	179.81	4239.26	-0.44	0.00	0.00	0.00	0.00	0.00	
4980.94	91.00	179.81	4700.00	-485.94	1.60	12.00	12.00	0.00	0.00	
6990.32	91.00	179.81	4664.92	-2495.00	8.20	0.00	0.00	0.00	0.00	PBHL Upper Lat

Survey

MD	Incl	Azim	TVD	N/S	E/W	VS	DLS	MapN	MapE	Comment
ft	deg	deg	ft	ft	ft	ft	deg/100ft	ft	ft	
4200.00	0.00	0.00	4200.00	0.00	0.00	0.00	0.00	667582.30	582959.50	
4219.27	0.00	0.00	4219.27	0.00	0.00	0.00	0.00	667582.30	582959.50	Top WS
4225.00	0.76	179.81	4225.00	-0.04	0.00	0.04	13.33	667582.26	582959.50	
4234.27	2.00	179.81	4234.27	-0.26	0.00	0.26	13.33	667582.04	582959.50	Btm WS
4239.27	2.00	179.81	4239.26	-0.44	0.00	0.44	0.00	667581.86	582959.50	Build
4250.00	3.29	179.81	4249.98	-0.93	0.00	0.93	12.00	667581.37	582959.50	
4275.00	6.29	179.81	4274.89	-3.02	0.01	3.02	12.00	667579.28	582959.51	
4300.00	9.29	179.81	4299.66	-6.40	0.02	6.40	12.00	667575.90	582959.52	
4325.00	12.29	179.81	4324.21	-11.08	0.04	11.08	12.00	667571.22	582959.54	
4350.00	15.29	179.81	4348.49	-17.04	0.06	17.04	12.00	667565.26	582959.56	
4375.00	18.29	179.81	4372.42	-24.26	0.08	24.26	12.00	667558.04	582959.58	
4400.00	21.29	179.81	4395.94	-32.72	0.11	32.72	12.00	667549.58	582959.61	
4425.00	24.29	179.81	4418.99	-42.40	0.14	42.40	12.00	667539.90	582959.64	
4450.00	27.29	179.81	4441.50	-53.28	0.18	53.28	12.00	667529.02	582959.68	
4475.00	30.29	179.81	4463.41	-65.31	0.21	65.32	12.00	667516.99	582959.71	



Weatherford

WFT Plan Report - X & Y's



Weatherford

Company: COG Operating	Date: 12/13/2012	Time: 13:28:12	Page: 3
Field: Eddy Co. NM (Nad27)	Co-ordinate(NE) Reference: Well #2 Grid North		
Site: Cadillac 15 State #2H	Vertical (TVD) Reference: SITE 3595.5		
Well: #2	Section (VS) Reference: Well (0.00N 0.00E 179.81Azi)		
Wellpath: Upper Lat	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Casing Points

MD	TVD	Diameter	Hole Size	Name

Annotation

MD ft	TVD ft	
4219.27	4219.27	Top WS
4234.27	4234.27	Btm WS
4239.27	4239.26	Build
4980.94	4700.00	LP
6990.31	4664.92	PBHL

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction



Weatherford

WFT Plan Report - X & Y's



Weatherford

Company: COG Operating	Date: 12/13/2012	Time: 13:28:12	Page: 2
Field: Eddy Co. NM (Nad27)	Co-ordinate(N/E) Reference: Well #2 Grid North		
Site: Cadillac 15 State #2H	Vertical(TVD) Reference: SITE 3595.5		
Well: #2	Section (VS) Reference: Well (0.00N 0.00E 179.81Azi)		
Wellpath: Upper Lat	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
4500.00	33.29	179.81	4484.65	-78.48	0.26	78.48	12.00	667503.82	582959.76	
4525.00	36.29	179.81	4505.18	-92.74	0.30	92.74	12.00	667489.56	582959.80	
4550.00	39.29	179.81	4524.94	-108.06	0.36	108.06	12.00	667474.24	582959.86	
4575.00	42.29	179.81	4543.87	-124.39	0.41	124.39	12.00	667457.91	582959.91	
4600.00	45.29	179.81	4561.91	-141.69	0.47	141.69	12.00	667440.61	582959.97	
4625.00	48.29	179.81	4579.03	-159.91	0.53	159.91	12.00	667422.39	582960.03	
4650.00	51.29	179.81	4595.17	-178.99	0.59	179.00	12.00	667403.31	582960.09	
4675.00	54.29	179.81	4610.28	-198.90	0.65	198.90	12.00	667383.40	582960.15	
4700.00	57.29	179.81	4624.34	-219.57	0.72	219.57	12.00	667362.73	582960.22	
4725.00	60.29	179.81	4637.29	-240.95	0.79	240.95	12.00	667341.35	582960.29	
4750.00	63.29	179.81	4649.11	-262.98	0.86	262.98	12.00	667319.32	582960.36	
4775.00	66.29	179.81	4659.76	-285.59	0.94	285.60	12.00	667296.71	582960.44	
4800.00	69.29	179.81	4669.21	-308.74	1.01	308.74	12.00	667273.56	582960.51	
4825.00	72.29	179.81	4677.43	-332.34	1.09	332.34	12.00	667249.96	582960.59	
4850.00	75.29	179.81	4684.41	-356.34	1.17	356.35	12.00	667225.96	582960.67	
4875.00	78.29	179.81	4690.13	-380.68	1.25	380.68	12.00	667201.62	582960.75	
4900.00	81.29	179.81	4694.56	-405.28	1.33	405.28	12.00	667177.02	582960.83	
4925.00	84.29	179.81	4697.70	-430.08	1.41	430.08	12.00	667152.22	582960.91	
4950.00	87.29	179.81	4699.53	-455.01	1.50	455.01	12.00	667127.29	582961.00	
4975.00	90.29	179.81	4700.06	-480.00	1.58	480.00	12.00	667102.30	582961.08	
4980.94	91.00	179.81	4700.00	-485.94	1.60	485.95	12.00	667096.36	582961.10	LP
5000.00	91.00	179.81	4699.66	-505.00	1.66	505.00	0.00	667077.30	582961.16	
5100.00	91.00	179.81	4697.92	-604.98	1.99	604.98	0.00	666977.32	582961.49	
5200.00	91.00	179.81	4696.17	-704.97	2.32	704.97	0.00	666877.33	582961.82	
5300.00	91.00	179.81	4694.43	-804.95	2.65	804.95	0.00	666777.35	582962.15	
5400.00	91.00	179.81	4692.68	-904.93	2.97	904.94	0.00	666677.37	582962.47	
5500.00	91.00	179.81	4690.94	-1004.92	3.30	1004.92	0.00	666577.38	582962.80	
5600.00	91.00	179.81	4689.19	-1104.90	3.63	1104.91	0.00	666477.40	582963.13	
5700.00	91.00	179.81	4687.44	-1204.89	3.96	1204.89	0.00	666377.41	582963.46	
5800.00	91.00	179.81	4685.70	-1304.87	4.29	1304.88	0.00	666277.43	582963.79	
5900.00	91.00	179.81	4683.95	-1404.85	4.62	1404.86	0.00	666177.45	582964.12	
6000.00	91.00	179.81	4682.21	-1504.84	4.95	1504.85	0.00	666077.46	582964.45	
6100.00	91.00	179.81	4680.46	-1604.82	5.27	1604.83	0.00	665977.48	582964.77	
6200.00	91.00	179.81	4678.72	-1704.81	5.60	1704.82	0.00	665877.49	582965.10	
6300.00	91.00	179.81	4676.97	-1804.79	5.93	1804.80	0.00	665777.51	582965.43	
6400.00	91.00	179.81	4675.22	-1904.78	6.26	1904.79	0.00	665677.52	582965.76	
6500.00	91.00	179.81	4673.48	-2004.76	6.59	2004.77	0.00	665577.54	582966.09	
6600.00	91.00	179.81	4671.73	-2104.74	6.92	2104.76	0.00	665477.56	582966.42	
6700.00	91.00	179.81	4669.99	-2204.73	7.25	2204.74	0.00	665377.57	582966.75	
6800.00	91.00	179.81	4668.24	-2304.71	7.57	2304.73	0.00	665277.59	582967.07	
6900.00	91.00	179.81	4666.50	-2404.70	7.90	2404.71	0.00	665177.60	582967.40	
6990.32	91.00	179.81	4664.92	-2495.00	8.20	2495.01	0.00	665087.30	582967.70	PBHL Upper Lat

Targets

Name	Description	TVD	N/S	E/W	Map Northing	Map Easting	Latitude	Longitude
Dip	Dir	ft	ft	ft	ft	ft	Deg Min Sec	Deg Min Sec
PBHL Upper Lat		4664.92	-2495.00	8.20	665087.30	582967.70	32 49 41.233 N	104 3 47.649 W

**Weatherford****Weatherford Drilling Services**

GeoDec v5.03

Report Date: December 13, 2012
Job Number: _____
Customer: COG Operating LLC
Well Name: Cadillac 15 State #2H
API Number: _____
Rig Name: _____
Location: Eddy Co., NM
Block: _____
Engineer: RWJ

US State Plane 1927	Geodetic Latitude / Longitude
System: New Mexico East 3001 (NON-EXACT)	System: Latitude / Longitude
Projection: SPC27 Transverse Mercator	Projection: Geodetic Latitude and Longitude
Datum: NAD 1927 (NADCON CONUS)	Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866	Ellipsoid: Clarke 1866
North/South 667582.300 USFT	Latitude 32.8349783 DEG
East/West 582959.500 USFT	Longitude -104.0632417 DEG
Grid Convergence: 15°	
Total Correction: +7.50°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.83498° N	32° 50 min 5.922 sec
Longitude =	104.06324° W	104° 3 min 47.670 sec

Magnetic Declination =	7.65°	[True North Offset]	
Local Gravity =	.9989 g	Checksum =	6599
Local Field Strength =	48776 nT	Magnetic Vector X =	23714 nT
Magnetic Dip =	60.62°	Magnetic Vector Y =	3184 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z =	42504 nT
Spud Date =	Mar 15, 2013	Magnetic Vector H =	23927 nT

Signed: _____

Date: _____