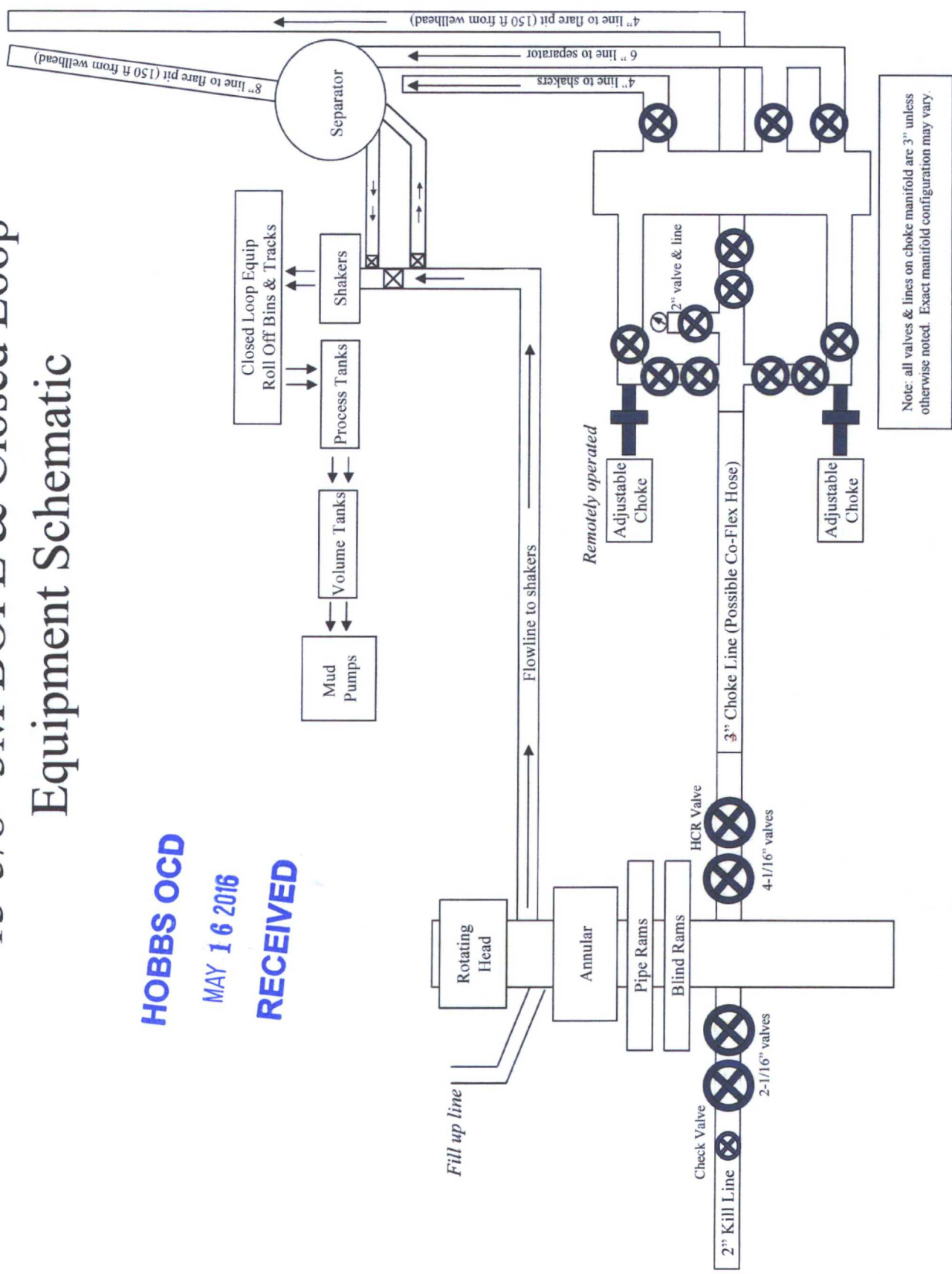


13-5/8" 3M BOPE & Closed Loop Equipment Schematic

HOBBS OCD
MAY 16 2016
RECEIVED





Fluid Technology

ContiTech Beattie Corp.
Website: www.contitechbeattie.com

Monday, June 14, 2010

RE: Drilling & Production Hoses
Lifting & Safety Equipment

To Helmerich & Payne,

A Continental Contitech hose assembly can perform as intended and suitable for the application regardless of whether the hose is secured or unsecured in its configuration. As a manufacturer of High Pressure Hose Assemblies for use in Drilling & Production, we do offer the corresponding lifting and safety equipment, this has the added benefit of easing the lifting and handling of each hose assembly whilst affording hose longevity by ensuring correct handling methods and procedures as well as securing the hose in the unlikely event of a failure; but in no way does the lifting and safety equipment affect the performance of the hoses providing the hoses have been handled and installed correctly. It is good practice to use lifting & safety equipment but not mandatory.

Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

ContiTech Beattie is part of the Continental AG Corporation and can offer the full support resources associated with a global organization.

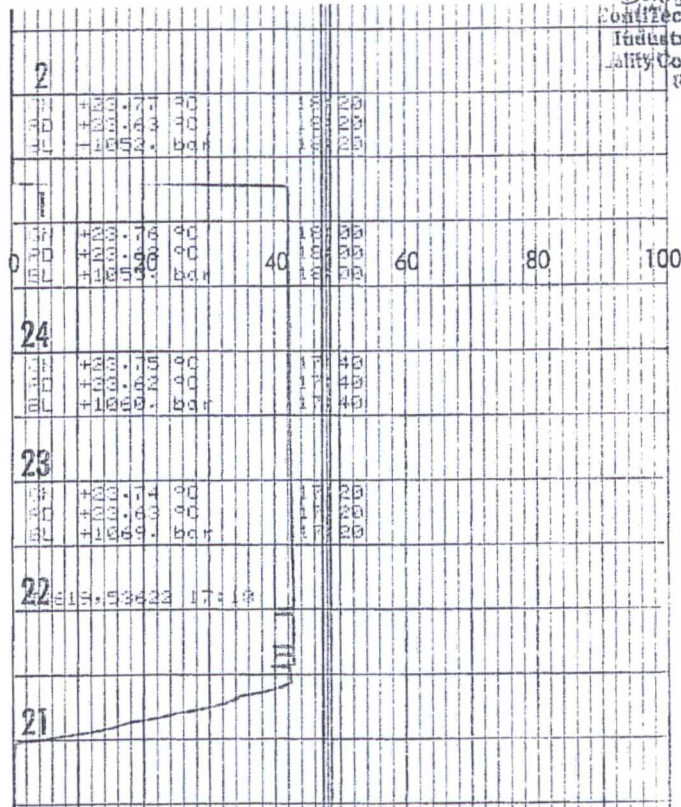
Best regards,

Robin Hodgson
Sales Manager
ContiTech Beattie Corp

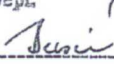
ContiTech Beattie Corp,
11535 Brittmoore Park Drive,
Houston, TX 77041
Phone: +1 (832) 327-0141
Fax: +1 (832) 327-0148
www.contitechbeattie.com

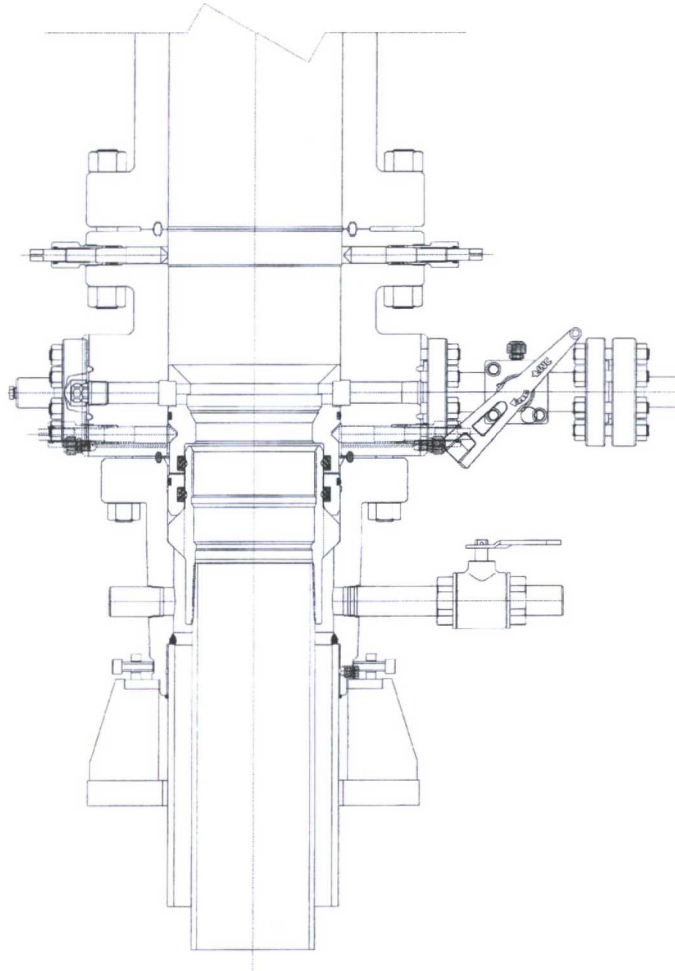


HARTMANN &



ContiTech Rubber
Industrial Kft.
Quality Control Dept.
(2)

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 1713	
PURCHASER: ContiTech Beattie Co.				P.O. N°: 002808	
CONTITECH ORDER N°: 426127		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 53622		NOMINAL / ACTUAL LENGTH: 10,67 m			
W.P. 68,96 MPa 10000 psi		T.P. 103,4 MPa 15000 psi		Duration: 60 min.	
Pressure test with water at ambient temperature See attachment. (1 page) ↑ 10 mm = 10 Min. → 10 mm = 25 MPa					
COUPLINGS Type		Serial N°		Quality	
3" coupling with 4 1/16" Flange end		5503 2029		AISI 4130 AISI 4130	
				Heat N° N1590P 27566	
INFOCHIP INSTALLED				API Spec 16 C Temperature rate: "B"	
All metal parts are flawless				Hose conform to NACE MR 01-75	
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.					
COUNTRY OF ORIGIN HUNGARY/EU					
Date: 25. August. 2008		Inspector		Quality Control ContiTech Rubber Industrial Kft. Quality Control Dept.  	



PRIMARY MODE

DEVON ENERGY

ARTESIA

S.E.N.M

13 3/8 X 9 5/8

QUOTE LAYOUT
F18648
REF: DM100161737
DM100151315

PRIVATE AND CONFIDENTIAL

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REVISIONS DESCRIPTION

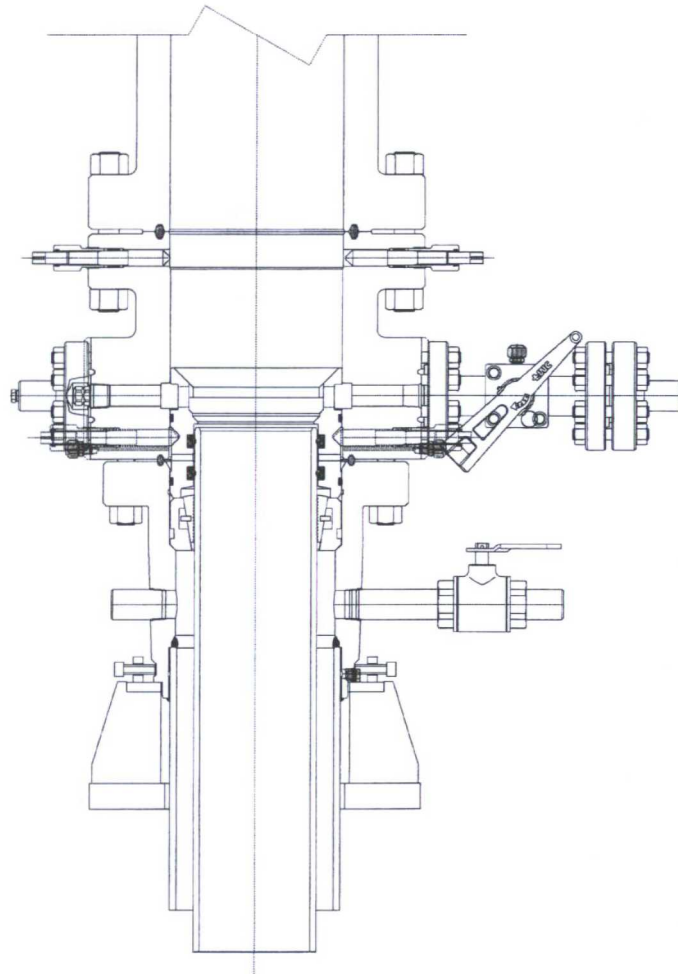
A	05-08-13
B	1-22-14
C	5-13-14

SURFACE WELLHEAD LAYOUT
UNIHEAD, UH-1, SOW,
DEVON ENERGY, ODESSA

DRAWN BY	
K. VU	05-08-13
DRAFTING REVIEW	
Z. MARQUEZ	05-08-13
DESIGN REVIEW	
K. TAHA	05-08-13
APPROVED BY	
R. HAMILTON	05-08-13

FMC Technologies

DRAWING NUMBER
DM100161771-2A



CONTINGENCY MODE

DEVON ENERGY
ARTESIA
S.E.N.M
13 3/8 X 9 5/8

QUOTE LAYOUT
F18648
REF: DM100161737
DM100151315

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HOBBS OCD

MAY 16 2016

RECEIVED

SD Plan Report

Devon Energy

Field Name: *Lea Co, NM Nad 83 NMEZ*
Site Name: *Rio Blanco 4-33 Fed Com 1H,3H Pad*
Well Name: *Rio Blanco 4-33 Fed Com 3H*
Plan: *P1:V1*

05 March 2015



Rio Blanco 4-33 Fed Com 3H

Field Name Lea Co, NM Nad 83 NMEZ	Map Units : US ft		Company Name : Devon Energy	
	Vertical Reference Datum (VRD) : Mean Sea Level			
	Projected Coordinate System : NAD83 / New Mexico East (ftUS)			
	Comment :			
Site Name Rio Blanco 4-33 Fed Com 1H,3H Pad	Units : US ft	North Reference : Grid	Convergence Angle : 0.46	
	Position	Northing : 486168.29 US ft	Latitude : 32° 20' 1.25"	
		Easting : 804086.94 US ft	Longitude : -103° 28' 57.50"	
	Elevation above Mean Sea Level:3415.00 US ft			
Comment :				
Slot Name Rio Blanco 4-33 Fed Com 3H	Position (Offsets relative to Site Centre)			
	+N / -S : 0.74 US ft	Northing :486169.03 US ft	Latitude : 32°20'1.25"	
	+E / -W : 100.03 US ft	Easting :804186.97 US ft	Longitude : -103°28'56.34"	
	Slot TVD Reference : Ground Elevation			
Elevation above Mean Sea Level : 3416.00 US ft				
Comment :				
Well Name Rio Blanco 4-33 Fed Com 3H	Type : Main well		UWI :	Plan : P1:V1
	Rig Height <i>Kelly Bushing</i> : 25.00 US ft		Comment :	
	Relative to Mean Sea Level: 3441.00 US ft			
	Closure Distance : 7574.8 US ft		Closure Azimuth : 359.23°	
	Vertical Section (Position of Origin Relative to Slot)			
	+N / -S : 0.00 US ft		+E / -W : 0.00 US ft	Az :359.23°
	Magnetic Parameters			
	Model : BGGM	Field Strength : 48246.8nT	Dec : 7.23°	Dip : 60.19°
				Date : 30/Jul/2015

Target Set

Name : Rio Blanco 4-33 Fed Com 3H **Number of Targets :** 1

Comment :

Target Name: PBHL 3H	Position (Relative to Slot centre)			
	+N / -S : 7574.12US ft	Northings : 493743.15 US ft	Latitude : 32°21'16.20"	
Shape: Cuboid	+E / -W : -101.75 US ft	Easting : 804085.22US ft	Longitude : -103°28'56.82"	
	TVD (Kelly Bushing) : 10010.00 US ft			
	Orientation Azimuth : 359.23°	Inclination : 0.00°		
	Dimensions Length : 14004.00 US ft	Breadth : 50.00 US ft	Height : 20.00 US ft	

Well path created using minimum curvature

SD Plan Report

Salient Points (Relative to Slot centre, TVD relative to Kelly Bushing)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	VS (US ft)	DLS (%/100 US ft)	B. Rate (%/100 US ft)	T. Rate (%/100 US ft)	T. Face (°)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9437.04	0.00	0.00	9437.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP
10337.04	90.00	359.23	10010.00	572.91	-7.70	572.96	10.00	10.00	0.00	359.23	LP
17338.89	90.00	359.23	10010.00	7574.12	-101.75	7574.80	0.00	0.00	0.00	0.00	PBHL 3H

Interpolated Points (Relative to Slot centre, TVD relative to Kelly Bushing)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	VS (US ft)	DLS (%/100 US ft)	Northing (US ft)	Easting (US ft)		Comment
9400.00	0.00	0.00	9400.00	0.00	0.00	0.00	0.00	486169.03	804186.97		
9437.04	0.00	0.00	9437.04	0.00	0.00	0.00	0.00	486169.03	804186.97		KOP
9500.00	6.30	359.23	9499.87	3.46	-0.05	3.46	10.00	486172.49	804186.92		
9600.00	16.30	359.23	9597.81	23.02	-0.31	23.02	10.00	486192.05	804186.66		
9700.00	26.30	359.23	9690.87	59.29	-0.80	59.29	10.00	486228.32	804186.17		
9800.00	36.30	359.23	9776.21	111.16	-1.49	111.17	10.00	486280.19	804185.48		
9900.00	46.30	359.23	9851.24	177.07	-2.38	177.08	10.00	486346.10	804184.59		
10000.00	56.30	359.23	9913.69	255.00	-3.43	255.02	10.00	486424.03	804183.54		
10100.00	66.30	359.23	9961.66	342.59	-4.60	342.62	10.00	486511.62	804182.37		
10200.00	76.30	359.23	9993.69	437.18	-5.87	437.22	10.00	486606.21	804181.10		
10300.00	86.30	359.23	10008.80	535.89	-7.20	535.94	10.00	486704.92	804179.77		
10337.04	90.00	359.23	10010.00	572.91	-7.70	572.96	10.00	486741.94	804179.27		LP
10400.00	90.00	359.23	10010.00	635.86	-8.54	635.92	0.00	486804.89	804178.43		
10500.00	90.00	359.23	10010.00	735.85	-9.89	735.92	0.00	486904.88	804177.08		
10600.00	90.00	359.23	10010.00	835.84	-11.23	835.92	0.00	487004.87	804175.74		
10700.00	90.00	359.23	10010.00	935.83	-12.57	935.92	0.00	487104.86	804174.40		
10800.00	90.00	359.23	10010.00	1035.82	-13.92	1035.92	0.00	487204.85	804173.05		
10900.00	90.00	359.23	10010.00	1135.81	-15.26	1135.92	0.00	487304.84	804171.71		
11000.00	90.00	359.23	10010.00	1235.80	-16.60	1235.92	0.00	487404.83	804170.37		
11100.00	90.00	359.23	10010.00	1335.80	-17.94	1335.92	0.00	487504.83	804169.03		
11200.00	90.00	359.23	10010.00	1435.79	-19.29	1435.92	0.00	487604.82	804167.68		
11300.00	90.00	359.23	10010.00	1535.78	-20.63	1535.92	0.00	487704.81	804166.34		
11400.00	90.00	359.23	10010.00	1635.77	-21.97	1635.92	0.00	487804.80	804165.00		
11500.00	90.00	359.23	10010.00	1735.76	-23.32	1735.92	0.00	487904.79	804163.65		
11600.00	90.00	359.23	10010.00	1835.75	-24.66	1835.92	0.00	488004.78	804162.31		
11700.00	90.00	359.23	10010.00	1935.74	-26.00	1935.92	0.00	488104.77	804160.97		
11800.00	90.00	359.23	10010.00	2035.73	-27.35	2035.92	0.00	488204.76	804159.62		
11900.00	90.00	359.23	10010.00	2135.72	-28.69	2135.92	0.00	488304.75	804158.28		
12000.00	90.00	359.23	10010.00	2235.71	-30.03	2235.92	0.00	488404.74	804156.94		
12100.00	90.00	359.23	10010.00	2335.71	-31.38	2335.92	0.00	488504.74	804155.59		
12200.00	90.00	359.23	10010.00	2435.70	-32.72	2435.92	0.00	488604.73	804154.25		
12300.00	90.00	359.23	10010.00	2535.69	-34.06	2535.92	0.00	488704.72	804152.91		
12400.00	90.00	359.23	10010.00	2635.68	-35.41	2635.92	0.00	488804.71	804151.56		
12500.00	90.00	359.23	10010.00	2735.67	-36.75	2735.92	0.00	488904.70	804150.22		
12600.00	90.00	359.23	10010.00	2835.66	-38.09	2835.92	0.00	489004.69	804148.88		
12700.00	90.00	359.23	10010.00	2935.65	-39.44	2935.92	0.00	489104.68	804147.53		
12800.00	90.00	359.23	10010.00	3035.64	-40.78	3035.92	0.00	489204.67	804146.19		
12900.00	90.00	359.23	10010.00	3135.63	-42.12	3135.92	0.00	489304.66	804144.85		
13000.00	90.00	359.23	10010.00	3235.62	-43.47	3235.92	0.00	489404.65	804143.50		
13100.00	90.00	359.23	10010.00	3335.62	-44.81	3335.92	0.00	489504.65	804142.16		
13200.00	90.00	359.23	10010.00	3435.61	-46.15	3435.92	0.00	489604.64	804140.82		
13300.00	90.00	359.23	10010.00	3535.60	-47.50	3535.92	0.00	489704.63	804139.47		
13400.00	90.00	359.23	10010.00	3635.59	-48.84	3635.92	0.00	489804.62	804138.13		
13500.00	90.00	359.23	10010.00	3735.58	-50.18	3735.92	0.00	489904.61	804136.79		
13600.00	90.00	359.23	10010.00	3835.57	-51.53	3835.92	0.00	490004.60	804135.44		
13700.00	90.00	359.23	10010.00	3935.56	-52.87	3935.92	0.00	490104.59	804134.10		
13800.00	90.00	359.23	10010.00	4035.55	-54.21	4035.92	0.00	490204.58	804132.76		
13900.00	90.00	359.23	10010.00	4135.54	-55.56	4135.92	0.00	490304.57	804131.41		
14000.00	90.00	359.23	10010.00	4235.53	-56.90	4235.92	0.00	490404.56	804130.07		
14100.00	90.00	359.23	10010.00	4335.52	-58.24	4335.92	0.00	490504.55	804128.73		
14200.00	90.00	359.23	10010.00	4435.52	-59.59	4435.92	0.00	490604.55	804127.38		

SD Plan Report

Interpolated Points (Relative to Slot centre, TVD relative to Kelly Bushing)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (%/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
14300.00	90.00	359.23	10010.00	4535.51	-60.93	4535.92	0.00	490704.54	804126.04	
14400.00	90.00	359.23	10010.00	4635.50	-62.27	4635.92	0.00	490804.53	804124.70	
14500.00	90.00	359.23	10010.00	4735.49	-63.62	4735.92	0.00	490904.52	804123.35	
14600.00	90.00	359.23	10010.00	4835.48	-64.96	4835.92	0.00	491004.51	804122.01	
14700.00	90.00	359.23	10010.00	4935.47	-66.30	4935.92	0.00	491104.50	804120.67	
14800.00	90.00	359.23	10010.00	5035.46	-67.65	5035.92	0.00	491204.49	804119.32	
14900.00	90.00	359.23	10010.00	5135.45	-68.99	5135.92	0.00	491304.48	804117.98	
15000.00	90.00	359.23	10010.00	5235.44	-70.33	5235.92	0.00	491404.47	804116.64	
15100.00	90.00	359.23	10010.00	5335.43	-71.68	5335.92	0.00	491504.46	804115.29	
15200.00	90.00	359.23	10010.00	5435.43	-73.02	5435.92	0.00	491604.46	804113.95	
15300.00	90.00	359.23	10010.00	5535.42	-74.36	5535.92	0.00	491704.45	804112.61	
15400.00	90.00	359.23	10010.00	5635.41	-75.71	5635.92	0.00	491804.44	804111.26	
15500.00	90.00	359.23	10010.00	5735.40	-77.05	5735.92	0.00	491904.43	804109.92	
15600.00	90.00	359.23	10010.00	5835.39	-78.39	5835.92	0.00	492004.42	804108.58	
15700.00	90.00	359.23	10010.00	5935.38	-79.74	5935.92	0.00	492104.41	804107.23	
15800.00	90.00	359.23	10010.00	6035.37	-81.08	6035.92	0.00	492204.40	804105.89	
15900.00	90.00	359.23	10010.00	6135.36	-82.42	6135.92	0.00	492304.39	804104.55	
16000.00	90.00	359.23	10010.00	6235.35	-83.77	6235.92	0.00	492404.38	804103.20	
16100.00	90.00	359.23	10010.00	6335.34	-85.11	6335.92	0.00	492504.37	804101.86	
16200.00	90.00	359.23	10010.00	6435.34	-86.45	6435.92	0.00	492604.37	804100.52	
16300.00	90.00	359.23	10010.00	6535.33	-87.79	6535.92	0.00	492704.36	804099.18	
16400.00	90.00	359.23	10010.00	6635.32	-89.14	6635.92	0.00	492804.35	804097.83	
16500.00	90.00	359.23	10010.00	6735.31	-90.48	6735.92	0.00	492904.34	804096.49	
16600.00	90.00	359.23	10010.00	6835.30	-91.82	6835.92	0.00	493004.33	804095.15	
16700.00	90.00	359.23	10010.00	6935.29	-93.17	6935.92	0.00	493104.32	804093.80	
16800.00	90.00	359.23	10010.00	7035.28	-94.51	7035.92	0.00	493204.31	804092.46	
16900.00	90.00	359.23	10010.00	7135.27	-95.85	7135.92	0.00	493304.30	804091.12	
17000.00	90.00	359.23	10010.00	7235.26	-97.20	7235.92	0.00	493404.29	804089.77	
17100.00	90.00	359.23	10010.00	7335.25	-98.54	7335.92	0.00	493504.28	804088.43	
17200.00	90.00	359.23	10010.00	7435.25	-99.88	7435.92	0.00	493604.28	804087.09	
17300.00	90.00	359.23	10010.00	7535.24	-101.23	7535.92	0.00	493704.27	804085.74	
17338.89	90.00	359.23	10010.00	7574.12	-101.75	7574.80	0.00	493743.15	804085.22	PBHL 3H

SD Anti-Collision Report**Devon Energy**

Field Name: *Lea Co, NM Nad 83 NMEZ*
Site Name: *Rio Blanco 4-33 Fed Com 1H,2H,3H Pad*
Well Name: *Rio Blanco 4-33 Fed Com 3H*

06 March 2015




Weatherford®

Rio Blanco 4-33 Fed Com 3H

Field Name Lea Co, NM Nad 83 NMEZ	Map Units : US ft		Company Name : Devon Energy	
	Vertical Reference Datum (VRD) : Mean Sea Level			
	Projected Coordinate System : NAD83 / New Mexico East (ftUS)			
	Comment :			
Site Name Rio Blanco 4-33 Fed Com 1H,2H,3H Pad	Units : US ft	North Reference : Grid	Convergence Angle : 0.46	
	Position	Northing : 486168.29 US ft	Latitude : 32° 20' 1.25"	
		Easting : 804086.94 US ft	Longitude : -103° 28' 57.50"	
	Elevation above Mean Sea Level:3415.00 US ft			
Comment :				
Slot Name Rio Blanco 4-33 Fed Com 3H	Position (Offsets relative to Site Centre)			
	+N / -S : 0.74 US ft	Northing :486169.03 US ft	Latitude : 32°20'1.25"	
	+E / -W : 100.03 US ft	Easting :804186.97 US ft	Longitude : -103°28'56.34"	
	Slot TVD Reference : Ground Elevation			
Elevation above Mean Sea Level : 3416.00 US ft				
Comment :				
Well Name Rio Blanco 4-33 Fed Com 3H	Type : Main well		UWI :	Plan : Working Plan
	Rig Height <i>Kelly Bushing</i> : 25.00 US ft		Comment :	
	Relative to Mean Sea Level: 3441.00 US ft			
	Closure Distance : 7574.8 US ft		Closure Azimuth : 359.23°	
	Vertical Section (Position of Origin Relative to Slot)			
	+N / -S : 0.00 US ft		+E / -W : 0.00 US ft	Az :359.23°
	Magnetic Parameters			
	Model : BGGM	Field Strength : 48246.8nT	Dec : 7.23°	Dip : 60.19°
				Date : 30/Jul/2015

Collision / Uncertainty Analysis

Primary Well	Start MD (US ft)	End MD (US ft)	Collision Risk Interval	No. of Std Deviations in Error Computation
Rio Blanco 4-33 Fed Com 3H (p)	0.00	17338.89	100.00	2

Secondary Well Names

Rio Blanco 4-33 Fed Com 2H (p)
Rio Blanco 4-33 Fed Com 1H (p)

Anti Collision Report Terminology

S.Minor, S.Major : Radii of the ellipse of uncertainty at the current location as seen in the along hole direction.

PHI : Angle between high-side vector and semi-minor axis

TVD Spread : Total TVD range of the ellipsoid of uncertainty at the current location

ES : Distance between the extremities of the primary and secondary uncertainty ellipsoids in the direction Cr-Cr

T.Face to Sec : Angle between the Hi-Side vector of the primary well at the current location and line of closest approach between the two wells

Separation factors calculated using Pedal Curve (Independent Uncertainty). Well path created using minimum curvature.

5D Anti-Collision Report

Anti Collision Proximity Summary (TVD relative to Kelly Bushing)

SF							
Secondary Well Name	Pri MD (US ft)	Sec MD (US ft)	TVD (US ft)	CC (US ft)	ES (US ft)	SF	Risk
Rio Blanco 4-33 Fed Com 2H (p)	4454.49	4454.20	4454.49	50.68	30.49	2.51	
Rio Blanco 4-33 Fed Com 1H (p)	8312.30	8310.81	8312.30	100.18	62.51	2.66	

Primary Well : Rio Blanco 4-33 Fed Com 3H (p) (TVD Relative to Kelly Bushing ; All Azimuth Relative to GRID NORTH)

MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	Nearest Well	CC (US ft)	ES (US ft)	SF	Risk
0.00	0.00	269.60	0.00	0.00	Rio Blanco 4-33 Fed Com 2H (p)	50.01	49.44	88.26	
100.00	100.00	269.60	0.11	0.11	Rio Blanco 4-33 Fed Com 2H (p)	50.01	49.22	63.52	
200.00	200.00	269.60	0.34	0.34	Rio Blanco 4-33 Fed Com 2H (p)	50.01	48.77	40.43	
300.00	300.00	269.60	0.56	0.56	Rio Blanco 4-33 Fed Com 2H (p)	50.01	48.32	29.66	
400.00	400.00	269.60	0.79	0.79	Rio Blanco 4-33 Fed Com 2H (p)	50.01	47.88	23.41	
500.00	500.00	269.60	1.01	1.01	Rio Blanco 4-33 Fed Com 2H (p)	50.01	47.43	19.34	
600.00	600.00	269.60	1.24	1.24	Rio Blanco 4-33 Fed Com 2H (p)	50.01	46.98	16.48	
700.00	700.00	269.60	1.46	1.46	Rio Blanco 4-33 Fed Com 2H (p)	50.01	46.53	14.35	
800.00	800.00	269.60	1.69	1.69	Rio Blanco 4-33 Fed Com 2H (p)	50.01	46.08	12.71	
900.00	900.00	269.60	1.91	1.91	Rio Blanco 4-33 Fed Com 2H (p)	50.01	45.63	11.41	
1000.00	1000.00	269.60	2.14	2.14	Rio Blanco 4-33 Fed Com 2H (p)	50.01	45.18	10.35	
1100.00	1100.00	269.60	2.36	2.36	Rio Blanco 4-33 Fed Com 2H (p)	50.01	44.73	9.47	
1200.00	1200.00	269.60	2.59	2.59	Rio Blanco 4-33 Fed Com 2H (p)	50.01	44.28	8.72	
1300.00	1300.00	269.60	2.81	2.81	Rio Blanco 4-33 Fed Com 2H (p)	50.01	43.83	8.09	
1400.00	1400.00	269.60	3.03	3.03	Rio Blanco 4-33 Fed Com 2H (p)	50.01	43.38	7.54	
1500.00	1500.00	269.60	3.26	3.26	Rio Blanco 4-33 Fed Com 2H (p)	50.01	42.93	7.06	
1600.00	1600.00	269.60	3.48	3.48	Rio Blanco 4-33 Fed Com 2H (p)	50.01	42.48	6.64	
1700.00	1700.00	269.60	3.71	3.71	Rio Blanco 4-33 Fed Com 2H (p)	50.01	42.03	6.27	
1800.00	1800.00	269.60	3.93	3.93	Rio Blanco 4-33 Fed Com 2H (p)	50.01	41.58	5.93	
1900.00	1900.00	269.60	4.16	4.16	Rio Blanco 4-33 Fed Com 2H (p)	50.01	41.13	5.63	
2000.00	2000.00	269.60	4.38	4.38	Rio Blanco 4-33 Fed Com 2H (p)	50.01	40.68	5.36	
2100.00	2100.00	269.60	4.61	4.61	Rio Blanco 4-33 Fed Com 2H (p)	50.01	40.23	5.11	

SD Anti-Collision Report

Primary Well : Rio Blanco 4-33 Fed Com 3H (p) (TVD Relative to Kelly Bushing ; All Azimuth Relative to GRID NORTH)									
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	Nearest Well	CC (US ft)	ES (US ft)	SF	Risk
2200.00	2200.00	269.60	4.83	4.83	Rio Blanco 4-33 Fed Com 2H (p)	50.01	39.78	4.89	
2300.00	2300.00	269.60	5.06	5.06	Rio Blanco 4-33 Fed Com 2H (p)	50.01	39.33	4.68	
2400.00	2400.00	269.60	5.28	5.28	Rio Blanco 4-33 Fed Com 2H (p)	50.01	38.88	4.49	
2500.00	2500.00	269.60	5.51	5.51	Rio Blanco 4-33 Fed Com 2H (p)	50.01	38.43	4.32	
2600.00	2600.00	269.60	5.73	5.73	Rio Blanco 4-33 Fed Com 2H (p)	50.01	37.98	4.16	
2700.00	2700.00	269.60	5.96	5.96	Rio Blanco 4-33 Fed Com 2H (p)	50.01	37.54	4.01	
2800.00	2800.00	269.60	6.18	6.18	Rio Blanco 4-33 Fed Com 2H (p)	50.01	37.09	3.87	
2900.00	2900.00	269.60	6.41	6.41	Rio Blanco 4-33 Fed Com 2H (p)	50.01	36.64	3.74	
3000.00	3000.00	269.60	6.63	6.63	Rio Blanco 4-33 Fed Com 2H (p)	50.01	36.19	3.62	
3100.00	3100.00	269.60	6.86	6.86	Rio Blanco 4-33 Fed Com 2H (p)	50.01	35.74	3.50	
3200.00	3200.00	269.60	7.08	7.08	Rio Blanco 4-33 Fed Com 2H (p)	50.01	35.29	3.40	
3300.00	3300.00	269.60	7.31	7.31	Rio Blanco 4-33 Fed Com 2H (p)	50.01	34.84	3.30	
3400.00	3400.00	269.60	7.53	7.53	Rio Blanco 4-33 Fed Com 2H (p)	50.01	34.39	3.20	
3500.00	3500.00	269.60	7.76	7.76	Rio Blanco 4-33 Fed Com 2H (p)	50.01	33.94	3.11	
3600.00	3600.00	269.60	7.98	7.98	Rio Blanco 4-33 Fed Com 2H (p)	50.01	33.49	3.03	
3700.00	3700.00	269.60	8.20	8.20	Rio Blanco 4-33 Fed Com 2H (p)	50.01	33.04	2.95	
3800.00	3800.00	269.60	8.43	8.43	Rio Blanco 4-33 Fed Com 2H (p)	50.01	32.59	2.87	
3900.00	3900.00	269.60	8.65	8.65	Rio Blanco 4-33 Fed Com 2H (p)	50.01	32.14	2.80	
4000.00	4000.00	269.60	8.88	8.88	Rio Blanco 4-33 Fed Com 2H (p)	50.01	31.69	2.73	
4100.00	4100.00	269.60	9.10	9.10	Rio Blanco 4-33 Fed Com 2H (p)	50.01	31.24	2.66	
4200.00	4200.00	269.39	9.33	9.33	Rio Blanco 4-33 Fed Com 2H (p)	50.01	30.83	2.61	
4300.00	4300.00	267.47	9.55	9.55	Rio Blanco 4-33 Fed Com 2H (p)	50.06	30.49	2.56	
4400.00	4400.00	263.58	9.78	9.78	Rio Blanco 4-33 Fed Com 2H (p)	50.33	30.35	2.52	
4500.00	4500.00	257.85	10.00	10.00	Rio Blanco 4-33 Fed Com 2H (p)	51.16	30.80	2.51	
4600.00	4600.00	250.58	10.23	10.23	Rio Blanco 4-33 Fed Com 2H (p)	53.04	32.30	2.56	
4700.00	4700.00	242.50	10.45	10.45	Rio Blanco 4-33 Fed Com 2H (p)	56.43	35.27	2.67	

SD Anti-Collision Report

Primary Well : Rio Blanco 4-33 Fed Com 3H (p) (TVD Relative to Kelly Bushing ; All Azimuth Relative to GRID NORTH)									
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	Nearest Well	CC (US ft)	ES (US ft)	SF	Risk
4800.00	4800.00	235.23	10.68	10.68	Rio Blanco 4-33 Fed Com 2H (p)	60.95	39.45	2.83	
4900.00	4900.00	229.05	10.90	10.90	Rio Blanco 4-33 Fed Com 2H (p)	66.32	44.39	3.02	
5000.00	5000.00	223.84	11.13	11.13	Rio Blanco 4-33 Fed Com 2H (p)	72.35	50.02	3.24	
5100.00	5100.00	219.61	11.35	11.35	Rio Blanco 4-33 Fed Com 2H (p)	78.58	55.79	3.45	
5200.00	5200.00	216.37	11.58	11.58	Rio Blanco 4-33 Fed Com 2H (p)	84.48	61.26	3.64	
5300.00	5300.00	213.86	11.80	11.80	Rio Blanco 4-33 Fed Com 2H (p)	89.87	66.22	3.80	
5400.00	5400.00	211.92	12.03	12.03	Rio Blanco 4-33 Fed Com 2H (p)	94.68	70.52	3.92	
5500.00	5500.00	269.58	12.25	12.25	Rio Blanco 4-33 Fed Com 1H (p)	100.03	74.97	3.99	
5600.00	5600.00	269.58	12.48	12.48	Rio Blanco 4-33 Fed Com 1H (p)	100.03	74.52	3.92	
5700.00	5700.00	269.58	12.70	12.70	Rio Blanco 4-33 Fed Com 1H (p)	100.03	74.07	3.85	
5800.00	5800.00	269.58	12.93	12.93	Rio Blanco 4-33 Fed Com 1H (p)	100.03	73.62	3.79	
5900.00	5900.00	269.58	13.15	13.15	Rio Blanco 4-33 Fed Com 1H (p)	100.03	73.17	3.72	
6000.00	6000.00	269.58	13.37	13.37	Rio Blanco 4-33 Fed Com 1H (p)	100.03	72.72	3.66	
6100.00	6100.00	269.58	13.60	13.60	Rio Blanco 4-33 Fed Com 1H (p)	100.03	72.27	3.60	
6200.00	6200.00	269.58	13.82	13.82	Rio Blanco 4-33 Fed Com 1H (p)	100.03	71.82	3.55	
6300.00	6300.00	269.58	14.05	14.05	Rio Blanco 4-33 Fed Com 1H (p)	100.03	71.37	3.49	
6400.00	6400.00	269.58	14.27	14.27	Rio Blanco 4-33 Fed Com 1H (p)	100.03	70.93	3.44	
6500.00	6500.00	269.58	14.50	14.50	Rio Blanco 4-33 Fed Com 1H (p)	100.03	70.48	3.38	
6600.00	6600.00	269.58	14.72	14.72	Rio Blanco 4-33 Fed Com 1H (p)	100.03	70.03	3.33	
6700.00	6700.00	269.58	14.95	14.95	Rio Blanco 4-33 Fed Com 1H (p)	100.03	69.58	3.28	
6800.00	6800.00	269.58	15.17	15.17	Rio Blanco 4-33 Fed Com 1H (p)	100.03	69.13	3.24	
6900.00	6900.00	269.58	15.40	15.40	Rio Blanco 4-33 Fed Com 1H (p)	100.03	68.68	3.19	
7000.00	7000.00	269.58	15.62	15.62	Rio Blanco 4-33 Fed Com 1H (p)	100.03	68.23	3.15	
7100.00	7100.00	269.58	15.85	15.85	Rio Blanco 4-33 Fed Com 1H (p)	100.03	67.78	3.10	
7200.00	7200.00	269.58	16.07	16.07	Rio Blanco 4-33 Fed Com 1H (p)	100.03	67.33	3.06	
7300.00	7300.00	269.58	16.30	16.30	Rio Blanco 4-33 Fed Com 1H (p)	100.03	66.88	3.02	

5D Anti-Collision Report

Primary Well : Rio Blanco 4-33 Fed Com 3H (p) (TVD Relative to Kelly Bushing ; All Azimuth Relative to GRID NORTH)									
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	Nearest Well	CC (US ft)	ES (US ft)	SF	Risk
7400.00	7400.00	269.58	16.52	16.52	Rio Blanco 4-33 Fed Com 1H (p)	100.03	66.43	2.98	
7500.00	7500.00	269.58	16.75	16.75	Rio Blanco 4-33 Fed Com 1H (p)	100.03	65.98	2.94	
7600.00	7600.00	269.58	16.97	16.97	Rio Blanco 4-33 Fed Com 1H (p)	100.03	65.53	2.90	
7700.00	7700.00	269.58	17.20	17.20	Rio Blanco 4-33 Fed Com 1H (p)	100.03	65.08	2.86	
7800.00	7800.00	269.58	17.42	17.42	Rio Blanco 4-33 Fed Com 1H (p)	100.03	64.63	2.83	
7900.00	7900.00	269.58	17.65	17.65	Rio Blanco 4-33 Fed Com 1H (p)	100.03	64.18	2.79	
8000.00	8000.00	269.58	17.87	17.87	Rio Blanco 4-33 Fed Com 1H (p)	100.03	63.73	2.76	
8100.00	8100.00	269.58	18.10	18.10	Rio Blanco 4-33 Fed Com 1H (p)	100.03	63.28	2.72	
8200.00	8200.00	269.58	18.32	18.32	Rio Blanco 4-33 Fed Com 1H (p)	100.03	62.83	2.69	
8300.00	8300.00	272.14	18.54	18.54	Rio Blanco 4-33 Fed Com 1H (p)	100.10	62.47	2.66	
8400.00	8400.00	283.22	18.77	18.77	Rio Blanco 4-33 Fed Com 1H (p)	103.00	65.05	2.71	
8500.00	8500.00	207.45	18.99	18.99	Rio Blanco 4-33 Fed Com 2H (p)	108.48	70.41	2.85	
8600.00	8600.00	207.45	19.22	19.22	Rio Blanco 4-33 Fed Com 2H (p)	108.48	69.97	2.82	
8700.00	8700.00	207.45	19.44	19.44	Rio Blanco 4-33 Fed Com 2H (p)	108.48	69.52	2.78	
8800.00	8800.00	207.45	19.67	19.67	Rio Blanco 4-33 Fed Com 2H (p)	108.48	69.07	2.75	
8900.00	8900.00	207.45	19.89	19.89	Rio Blanco 4-33 Fed Com 2H (p)	108.48	68.62	2.72	
9000.00	9000.00	207.45	20.12	20.12	Rio Blanco 4-33 Fed Com 2H (p)	108.48	68.17	2.69	
9100.00	9100.00	207.45	20.34	20.34	Rio Blanco 4-33 Fed Com 2H (p)	108.48	67.72	2.66	
9200.00	9200.00	207.45	20.57	20.57	Rio Blanco 4-33 Fed Com 2H (p)	108.48	67.27	2.63	
9300.00	9300.00	207.45	20.79	20.79	Rio Blanco 4-33 Fed Com 2H (p)	108.48	66.83	2.60	
9400.00	9400.00	207.45	21.02	21.02	Rio Blanco 4-33 Fed Com 2H (p)	108.48	66.38	2.58	
9500.00	9499.87	207.52	21.24	21.11	Rio Blanco 4-33 Fed Com 2H (p)	111.54	69.02	2.62	
9600.00	9597.81	204.26	21.45	20.97	Rio Blanco 4-33 Fed Com 2H (p)	129.22	86.22	3.01	
9700.00	9690.87	200.28	21.67	20.43	Rio Blanco 4-33 Fed Com 2H (p)	163.15	119.74	3.76	
9800.00	9776.21	197.11	21.88	19.57	Rio Blanco 4-33 Fed Com 2H (p)	213.02	169.23	4.86	
9900.00	9851.24	195.23	22.17	18.50	Rio Blanco 4-33 Fed Com 2H (p)	277.45	233.30	6.28	

SD Anti-Collision Report

Primary Well : Rio Blanco 4-33 Fed Com 3H (p) (TVD Relative to Kelly Bushing ; All Azimuth Relative to GRID NORTH)									
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	Nearest Well	CC (US ft)	ES (US ft)	SF	Risk
10000.00	9913.69	194.77	22.52	17.39	Rio Blanco 4-33 Fed Com 2H (p)	354.34	309.92	7.98	
10100.00	9961.66	196.24	22.96	16.39	Rio Blanco 4-33 Fed Com 2H (p)	441.20	396.63	9.90	
10200.00	9993.69	202.12	23.51	15.65	Rio Blanco 4-33 Fed Com 2H (p)	535.27	490.61	11.99	
10300.00	10008.80	231.50	24.16	15.28	Rio Blanco 4-33 Fed Com 2H (p)	633.61	588.88	14.17	
10400.00	10010.00	270.00	24.91	15.41	Rio Blanco 4-33 Fed Com 2H (p)	733.30	688.52	16.38	
10500.00	10010.00	270.00	25.77	15.61	Rio Blanco 4-33 Fed Com 2H (p)	833.08	788.27	18.59	
10600.00	10010.00	270.00	26.72	15.84	Rio Blanco 4-33 Fed Com 2H (p)	932.91	888.08	20.81	
10700.00	10010.00	270.00	27.77	16.09	Rio Blanco 4-33 Fed Com 2H (p)	1032.77	987.92	23.03	
10800.00	10010.00	270.00	28.89	16.38	Rio Blanco 4-33 Fed Com 2H (p)	1132.66	1087.79	25.24	
10900.00	10010.00	270.00	30.08	16.69	Rio Blanco 4-33 Fed Com 2H (p)	1232.57	1187.68	27.46	
11000.00	10010.00	181.87	31.33	17.03	Rio Blanco 4-33 Fed Com 2H (p)	1295.69	1257.65	34.06	
11100.00	10010.00	181.85	32.64	17.40	Rio Blanco 4-33 Fed Com 2H (p)	1295.67	1256.92	33.44	
11200.00	10010.00	181.82	34.00	17.78	Rio Blanco 4-33 Fed Com 2H (p)	1295.65	1256.16	32.81	
11300.00	10010.00	181.79	35.40	18.19	Rio Blanco 4-33 Fed Com 2H (p)	1295.63	1255.37	32.18	
11400.00	10010.00	181.76	36.83	18.61	Rio Blanco 4-33 Fed Com 2H (p)	1295.61	1254.56	31.56	
11500.00	10010.00	181.73	38.30	19.05	Rio Blanco 4-33 Fed Com 2H (p)	1295.59	1253.74	30.96	
11600.00	10010.00	181.70	39.80	19.51	Rio Blanco 4-33 Fed Com 2H (p)	1295.57	1252.78	30.27	
11700.00	10010.00	181.67	41.33	19.98	Rio Blanco 4-33 Fed Com 2H (p)	1295.55	1251.84	29.64	
11800.00	10010.00	181.64	42.88	20.45	Rio Blanco 4-33 Fed Com 2H (p)	1295.53	1250.94	29.05	
11900.00	10010.00	181.61	44.46	20.95	Rio Blanco 4-33 Fed Com 2H (p)	1295.51	1249.87	28.38	
12000.00	10010.00	181.58	46.05	21.53	Rio Blanco 4-33 Fed Com 2H (p)	1295.49	1248.83	27.76	
12100.00	10010.00	181.55	47.66	22.01	Rio Blanco 4-33 Fed Com 2H (p)	1295.48	1247.86	27.21	
12200.00	10010.00	181.52	49.28	22.61	Rio Blanco 4-33 Fed Com 2H (p)	1295.46	1246.82	26.64	
12300.00	10010.00	181.49	50.92	23.16	Rio Blanco 4-33 Fed Com 2H (p)	1295.44	1245.67	26.03	
12400.00	10010.00	181.46	52.57	23.72	Rio Blanco 4-33 Fed Com 2H (p)	1295.42	1244.63	25.50	
12500.00	10010.00	181.43	54.23	24.29	Rio Blanco 4-33 Fed Com 2H (p)	1295.41	1243.45	24.93	

SD Anti-Collision Report

Primary Well : Rio Blanco 4-33 Fed Com 3H (p) (TVD Relative to Kelly Bushing ; All Azimuth Relative to GRID NORTH)									
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	Nearest Well	CC (US ft)	ES (US ft)	SF	Risk
12600.00	10010.00	181.40	55.91	24.83	Rio Blanco 4-33 Fed Com 2H (p)	1295.39	1242.38	24.44	
12700.00	10010.00	181.37	57.59	25.39	Rio Blanco 4-33 Fed Com 2H (p)	1295.37	1241.33	23.97	
12800.00	10010.00	181.34	59.28	26.01	Rio Blanco 4-33 Fed Com 2H (p)	1295.36	1240.07	23.43	
12900.00	10010.00	181.31	60.98	26.63	Rio Blanco 4-33 Fed Com 2H (p)	1295.34	1238.84	22.92	
13000.00	10010.00	181.28	62.69	27.25	Rio Blanco 4-33 Fed Com 2H (p)	1295.33	1237.61	22.44	
13100.00	10010.00	357.35	64.40	27.87	Rio Blanco 4-33 Fed Com 1H (p)	1210.30	1155.21	21.97	
13200.00	10010.00	357.41	66.12	28.50	Rio Blanco 4-33 Fed Com 1H (p)	1210.23	1153.89	21.48	
13300.00	10010.00	357.47	67.85	29.13	Rio Blanco 4-33 Fed Com 1H (p)	1210.18	1152.55	21.00	
13400.00	10010.00	357.54	69.58	29.77	Rio Blanco 4-33 Fed Com 1H (p)	1210.12	1151.22	20.54	
13500.00	10010.00	357.60	71.32	30.41	Rio Blanco 4-33 Fed Com 1H (p)	1210.06	1149.88	20.11	
13600.00	10010.00	357.66	73.06	31.05	Rio Blanco 4-33 Fed Com 1H (p)	1210.01	1148.53	19.68	
13700.00	10010.00	357.72	74.80	31.70	Rio Blanco 4-33 Fed Com 1H (p)	1209.95	1147.18	19.28	
13800.00	10010.00	357.79	76.55	32.35	Rio Blanco 4-33 Fed Com 1H (p)	1209.90	1145.83	18.88	
13900.00	10010.00	357.85	78.31	33.00	Rio Blanco 4-33 Fed Com 1H (p)	1209.85	1144.47	18.51	
14000.00	10010.00	357.91	80.06	33.66	Rio Blanco 4-33 Fed Com 1H (p)	1209.80	1143.10	18.14	
14100.00	10010.00	357.97	81.82	34.32	Rio Blanco 4-33 Fed Com 1H (p)	1209.76	1141.72	17.78	
14200.00	10010.00	358.04	83.59	34.98	Rio Blanco 4-33 Fed Com 1H (p)	1209.71	1140.32	17.43	
14300.00	10010.00	358.10	85.35	35.64	Rio Blanco 4-33 Fed Com 1H (p)	1209.67	1138.92	17.10	
14400.00	10010.00	358.16	87.12	36.31	Rio Blanco 4-33 Fed Com 1H (p)	1209.62	1137.52	16.78	
14500.00	10010.00	358.22	88.89	36.98	Rio Blanco 4-33 Fed Com 1H (p)	1209.58	1136.12	16.47	
14600.00	10010.00	358.29	90.66	37.65	Rio Blanco 4-33 Fed Com 1H (p)	1209.54	1134.72	16.16	
14700.00	10010.00	358.35	92.44	38.33	Rio Blanco 4-33 Fed Com 1H (p)	1209.50	1133.31	15.87	
14800.00	10010.00	358.41	94.22	39.01	Rio Blanco 4-33 Fed Com 1H (p)	1209.46	1131.90	15.59	
14900.00	10010.00	358.47	96.00	39.68	Rio Blanco 4-33 Fed Com 1H (p)	1209.43	1130.49	15.32	
15000.00	10010.00	358.54	97.78	40.36	Rio Blanco 4-33 Fed Com 1H (p)	1209.39	1129.07	15.06	
15100.00	10010.00	358.60	99.56	41.05	Rio Blanco 4-33 Fed Com 1H (p)	1209.36	1127.66	14.80	

SD Anti-Collision Report

Primary Well : Rio Blanco 4-33 Fed Com 3H (p) (TVD Relative to Kelly Bushing ; All Azimuth Relative to GRID NORTH)									
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	Nearest Well	CC (US ft)	ES (US ft)	SF	Risk
15200.00	10010.00	358.66	101.35	41.73	Rio Blanco 4-33 Fed Com 1H (p)	1209.33	1126.24	14.55	
15300.00	10010.00	358.72	103.14	42.42	Rio Blanco 4-33 Fed Com 1H (p)	1209.30	1124.82	14.31	
15400.00	10010.00	358.79	104.92	43.10	Rio Blanco 4-33 Fed Com 1H (p)	1209.27	1123.40	14.08	
15500.00	10010.00	358.85	106.71	43.79	Rio Blanco 4-33 Fed Com 1H (p)	1209.24	1121.98	13.86	
15600.00	10010.00	358.91	108.51	44.48	Rio Blanco 4-33 Fed Com 1H (p)	1209.22	1120.56	13.64	
15700.00	10010.00	358.97	110.30	45.18	Rio Blanco 4-33 Fed Com 1H (p)	1209.19	1119.14	13.43	
15800.00	10010.00	359.04	112.09	45.87	Rio Blanco 4-33 Fed Com 1H (p)	1209.17	1117.71	13.22	
15900.00	10010.00	359.10	113.89	46.56	Rio Blanco 4-33 Fed Com 1H (p)	1209.15	1116.29	13.02	
16000.00	10010.00	359.16	115.68	47.26	Rio Blanco 4-33 Fed Com 1H (p)	1209.13	1114.87	12.83	
16100.00	10010.00	359.22	117.48	47.95	Rio Blanco 4-33 Fed Com 1H (p)	1209.11	1113.44	12.64	
16200.00	10010.00	359.29	119.28	48.65	Rio Blanco 4-33 Fed Com 1H (p)	1209.09	1112.02	12.46	
16300.00	10010.00	359.35	121.08	49.35	Rio Blanco 4-33 Fed Com 1H (p)	1209.08	1110.59	12.28	
16400.00	10010.00	359.41	122.88	50.05	Rio Blanco 4-33 Fed Com 1H (p)	1209.06	1109.17	12.10	
16500.00	10010.00	359.48	124.68	50.75	Rio Blanco 4-33 Fed Com 1H (p)	1209.05	1107.74	11.93	
16600.00	10010.00	359.54	126.48	51.45	Rio Blanco 4-33 Fed Com 1H (p)	1209.04	1106.32	11.77	
16700.00	10010.00	359.60	128.29	52.15	Rio Blanco 4-33 Fed Com 1H (p)	1209.03	1104.89	11.61	
16800.00	10010.00	359.66	130.09	52.86	Rio Blanco 4-33 Fed Com 1H (p)	1209.02	1103.47	11.45	
16900.00	10010.00	359.73	131.89	53.56	Rio Blanco 4-33 Fed Com 1H (p)	1209.01	1102.04	11.30	
17000.00	10010.00	359.79	133.70	54.27	Rio Blanco 4-33 Fed Com 1H (p)	1209.01	1100.62	11.15	
17100.00	10010.00	359.85	135.50	54.97	Rio Blanco 4-33 Fed Com 1H (p)	1209.00	1099.19	11.01	
17200.00	10010.00	359.91	137.31	55.68	Rio Blanco 4-33 Fed Com 1H (p)	1209.00	1097.77	10.87	
17300.00	10010.00	359.98	139.12	56.38	Rio Blanco 4-33 Fed Com 1H (p)	1209.00	1096.34	10.73	
17338.89	10010.00	0.00	139.82	56.66	Rio Blanco 4-33 Fed Com 1H (p)	1209.00	1095.79	10.68	

Secondary Well : Rio Blanco 4-33 Fed Com 2H (p) (TVD Relative to Kelly Bushing (Primary) ; All Azimuth Relative to GRID NORTH)									
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	CC (US ft)	ES (US ft)	SF	Risk
0.00	0.00	0.00	269.60	0.00	0.00	50.01	49.44	88.26	
100.00	100.00	100.00	269.60	0.11	0.11	50.01	49.22	63.52	
200.00	200.00	200.00	269.60	0.34	0.34	50.01	48.77	40.43	

SD Anti-Collision Report

Secondary Well : Rio Blanco 4-33 Fed Com 2H (p) (TVD Relative to Kelly Bushing (Primary) ; All Azimuth Relative to GRID NORTH)									
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	CC (US ft)	ES (US ft)	SF	Risk
300.00	300.00	300.00	269.60	0.56	0.56	50.01	48.32	29.66	
400.00	400.00	400.00	269.60	0.79	0.79	50.01	47.88	23.41	
500.00	500.00	500.00	269.60	1.01	1.01	50.01	47.43	19.34	
600.00	600.00	600.00	269.60	1.24	1.24	50.01	46.98	16.48	
700.00	700.00	700.00	269.60	1.46	1.46	50.01	46.53	14.35	
800.00	800.00	800.00	269.60	1.69	1.69	50.01	46.08	12.71	
900.00	900.00	900.00	269.60	1.91	1.91	50.01	45.63	11.41	
1000.00	1000.00	1000.00	269.60	2.14	2.14	50.01	45.18	10.35	
1100.00	1100.00	1100.00	269.60	2.36	2.36	50.01	44.73	9.47	
1200.00	1200.00	1200.00	269.60	2.59	2.59	50.01	44.28	8.72	
1300.00	1300.00	1300.00	269.60	2.81	2.81	50.01	43.83	8.09	
1400.00	1400.00	1400.00	269.60	3.03	3.03	50.01	43.38	7.54	
1500.00	1500.00	1500.00	269.60	3.26	3.26	50.01	42.93	7.06	
1600.00	1600.00	1600.00	269.60	3.48	3.48	50.01	42.48	6.64	
1700.00	1700.00	1700.00	269.60	3.71	3.71	50.01	42.03	6.27	
1800.00	1800.00	1800.00	269.60	3.93	3.93	50.01	41.58	5.93	
1900.00	1900.00	1900.00	269.60	4.16	4.16	50.01	41.13	5.63	
2000.00	2000.00	2000.00	269.60	4.38	4.38	50.01	40.68	5.36	
2100.00	2100.00	2100.00	269.60	4.61	4.61	50.01	40.23	5.11	
2200.00	2200.00	2200.00	269.60	4.83	4.83	50.01	39.78	4.89	
2300.00	2300.00	2300.00	269.60	5.06	5.06	50.01	39.33	4.68	
2400.00	2400.00	2400.00	269.60	5.28	5.28	50.01	38.88	4.49	
2500.00	2500.00	2500.00	269.60	5.51	5.51	50.01	38.43	4.32	
2600.00	2600.00	2600.00	269.60	5.73	5.73	50.01	37.98	4.16	
2700.00	2700.00	2700.00	269.60	5.96	5.96	50.01	37.54	4.01	
2800.00	2800.00	2800.00	269.60	6.18	6.18	50.01	37.09	3.87	
2900.00	2900.00	2900.00	269.60	6.41	6.41	50.01	36.64	3.74	
3000.00	3000.00	3000.00	269.60	6.63	6.63	50.01	36.19	3.62	
3100.00	3100.00	3100.00	269.60	6.86	6.86	50.01	35.74	3.50	
3200.00	3200.00	3200.00	269.60	7.08	7.08	50.01	35.29	3.40	
3300.00	3300.00	3300.00	269.60	7.31	7.31	50.01	34.84	3.30	
3400.00	3400.00	3400.00	269.60	7.53	7.53	50.01	34.39	3.20	
3500.00	3500.00	3500.00	269.60	7.76	7.76	50.01	33.94	3.11	
3600.00	3600.00	3600.00	269.60	7.98	7.98	50.01	33.49	3.03	
3700.00	3700.00	3700.00	269.60	8.20	8.20	50.01	33.04	2.95	
3800.00	3800.00	3800.00	269.60	8.43	8.43	50.01	32.59	2.87	
3900.00	3900.00	3900.00	269.60	8.65	8.65	50.01	32.14	2.80	
4000.00	4000.00	4000.00	269.60	8.88	8.88	50.01	31.69	2.73	
4100.00	4100.00	4100.00	269.60	9.10	9.10	50.01	31.24	2.66	
4200.00	4200.00	4200.00	269.39	9.31	9.31	50.01	30.83	2.61	
4300.00	4299.94	4299.96	267.47	9.48	9.48	50.06	30.49	2.56	
4400.00	4399.76	4399.83	263.58	9.65	9.64	50.33	30.35	2.52	
4500.00	4499.35	4499.56	257.85	9.82	9.80	51.16	30.80	2.51	
4600.00	4598.63	4599.08	250.58	9.99	9.96	53.04	32.30	2.56	
4700.00	4697.72	4698.53	242.50	10.17	10.13	56.43	35.27	2.67	
4800.00	4796.96	4798.15	235.23	10.35	10.31	60.95	39.45	2.83	
4900.00	4896.20	4897.77	229.05	10.54	10.49	66.32	44.39	3.02	
5000.00	4995.44	4997.38	223.84	10.73	10.67	72.35	50.02	3.24	
5100.00	5095.21	5097.50	219.61	10.94	10.88	78.58	55.79	3.45	
5200.00	5195.21	5197.78	216.37	11.17	11.11	84.48	61.26	3.64	
5300.00	5295.40	5298.19	213.86	11.41	11.35	89.87	66.22	3.80	
5400.00	5395.76	5398.71	211.92	11.65	11.58	94.68	70.52	3.92	
5500.00	5496.25	5499.32	210.43	11.88	11.81	98.82	74.19	4.01	
5600.00	5596.86	5600.01	209.29	12.11	12.04	102.26	77.18	4.08	
5700.00	5697.56	5700.76	208.46	12.34	12.26	104.96	79.43	4.11	
5800.00	5798.33	5801.56	207.89	12.57	12.49	106.91	80.93	4.12	
5900.00	5899.15	5902.38	207.56	12.80	12.72	108.08	81.66	4.09	
6000.00	5999.99	6003.23	207.45	13.02	12.94	108.48	81.61	4.04	

SD Anti-Collision Report

Secondary Well : Rio Blanco 4-33 Fed Com 2H (p) (TVD Relative to Kelly Bushing (Primary) ; All Azimuth Relative to GRID NORTH)									
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	CC (US ft)	ES (US ft)	SF	Risk
6100.00	6100.00	6103.23	207.45	13.24	13.16	108.48	81.16	3.97	
6200.00	6200.00	6203.23	207.45	13.47	13.39	108.48	80.72	3.91	
6300.00	6300.00	6303.23	207.45	13.69	13.61	108.48	80.27	3.85	
6400.00	6400.00	6403.23	207.45	13.91	13.83	108.48	79.82	3.79	
6500.00	6500.00	6503.23	207.45	14.13	14.06	108.48	79.37	3.73	
6600.00	6600.00	6603.23	207.45	14.36	14.28	108.48	78.93	3.67	
6700.00	6700.00	6703.23	207.45	14.58	14.50	108.48	78.48	3.62	
6800.00	6800.00	6803.23	207.45	14.80	14.73	108.48	78.03	3.56	
6900.00	6900.00	6903.23	207.45	15.02	14.95	108.48	77.58	3.51	
7000.00	7000.00	7003.23	207.45	15.25	15.17	108.48	77.13	3.46	
7100.00	7100.00	7103.23	207.45	15.47	15.40	108.48	76.69	3.41	
7200.00	7200.00	7203.23	207.45	15.69	15.62	108.48	76.24	3.36	
7300.00	7300.00	7303.23	207.45	15.91	15.85	108.48	75.79	3.32	
7400.00	7400.00	7403.23	207.45	16.14	16.07	108.48	75.34	3.27	
7500.00	7500.00	7503.23	207.45	16.36	16.29	108.48	74.90	3.23	
7600.00	7600.00	7603.23	207.45	16.58	16.52	108.48	74.45	3.19	
7700.00	7700.00	7703.23	207.45	16.80	16.74	108.48	74.00	3.15	
7800.00	7800.00	7803.23	207.45	17.03	16.96	108.48	73.55	3.11	
7900.00	7900.00	7903.23	207.45	17.25	17.19	108.48	73.10	3.07	
8000.00	8000.00	8003.23	207.45	17.47	17.41	108.48	72.65	3.03	
8100.00	8100.00	8103.23	207.45	17.70	17.64	108.48	72.21	2.99	
8200.00	8200.00	8203.23	207.45	17.92	17.86	108.48	71.76	2.95	
8300.00	8300.00	8303.23	207.45	18.14	18.08	108.48	71.31	2.92	
8400.00	8400.00	8403.23	207.45	18.37	18.31	108.48	70.86	2.88	
8500.00	8500.00	8503.23	207.45	18.59	18.53	108.48	70.41	2.85	
8600.00	8600.00	8603.23	207.45	18.81	18.76	108.48	69.97	2.82	
8700.00	8700.00	8703.23	207.45	19.04	18.98	108.48	69.52	2.78	
8800.00	8800.00	8803.23	207.45	19.26	19.20	108.48	69.07	2.75	
8900.00	8900.00	8903.23	207.45	19.48	19.43	108.48	68.62	2.72	
9000.00	9000.00	9003.23	207.45	19.71	19.65	108.48	68.17	2.69	
9100.00	9100.00	9103.23	207.45	19.93	19.88	108.48	67.72	2.66	
9200.00	9200.00	9203.23	207.45	20.15	20.10	108.48	67.27	2.63	
9300.00	9300.00	9303.23	207.45	20.38	20.33	108.48	66.83	2.60	
9400.00	9400.00	9403.23	207.45	20.60	20.55	108.48	66.38	2.58	
9500.00	9499.87	9503.11	207.52	20.82	20.77	111.54	69.02	2.62	
9600.00	9597.81	9601.05	204.26	21.04	20.99	129.22	86.22	3.01	
9700.00	9690.87	9694.10	200.28	21.25	21.20	163.15	119.74	3.76	
9800.00	9776.21	9779.44	197.11	21.44	21.39	213.02	169.23	4.86	
9900.00	9851.24	9854.48	195.23	21.61	21.56	277.45	233.30	6.28	
10000.00	9913.69	9916.93	194.77	21.75	21.70	354.34	309.92	7.98	
10100.00	9961.66	9964.90	196.24	21.86	21.81	441.20	396.63	9.90	
10200.00	9993.69	9996.92	202.12	21.93	21.88	535.27	490.61	11.99	
10300.00	10008.80	10012.04	231.50	21.96	21.91	633.61	588.88	14.17	
10400.00	10010.00	10013.23	270.00	21.97	21.92	733.30	688.52	16.38	
10500.00	10010.00	10013.23	270.00	21.97	21.92	833.08	788.27	18.59	
10600.00	10010.00	10013.23	270.00	21.97	21.92	932.91	888.08	20.81	
10700.00	10010.00	10013.23	270.00	21.97	21.92	1032.77	987.92	23.03	
10800.00	10010.00	10013.23	270.00	21.97	21.92	1132.66	1087.79	25.24	
10900.00	10010.00	10013.23	270.00	21.97	21.92	1232.57	1187.68	27.46	
11000.00	11305.00	12394.13	181.87	33.26	20.43	1295.69	1257.65	34.06	
11100.00	11305.00	12494.13	181.85	34.51	20.78	1295.67	1256.92	33.44	
11200.00	11305.00	12594.13	181.82	35.81	21.14	1295.65	1256.16	32.81	
11300.00	11305.00	12694.12	181.79	37.15	21.51	1295.63	1255.37	32.18	
11400.00	11305.00	12794.12	181.76	38.53	21.88	1295.61	1254.56	31.56	
11500.00	11305.00	12894.12	181.73	39.95	22.23	1295.59	1253.74	30.96	
11600.00	11305.00	12994.12	181.70	41.40	22.70	1295.57	1252.78	30.27	
11700.00	11305.00	13094.12	181.67	42.88	23.16	1295.55	1251.84	29.64	
11800.00	11305.00	13194.11	181.64	44.39	23.54	1295.53	1250.94	29.05	

SD Anti-Collision Report

Secondary Well : Rio Blanco 4-33 Fed Com 2H (p) (TVD Relative to Kelly Bushing (Primary) ; All Azimuth Relative to GRID NORTH)									
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	CC (US ft)	ES (US ft)	SF	Risk
11900.00	11305.00	13294.11	181.61	45.92	24.07	1295.51	1249.87	28.38	
12000.00	11305.00	13394.11	181.58	47.47	24.55	1295.49	1248.83	27.76	
12100.00	11305.00	13494.11	181.55	49.04	25.01	1295.48	1247.86	27.21	
12200.00	11305.00	13594.10	181.52	50.62	25.47	1295.46	1246.82	26.64	
12300.00	11305.00	13694.10	181.49	52.23	26.06	1295.44	1245.67	26.03	
12400.00	11305.00	13794.10	181.46	53.84	26.53	1295.42	1244.63	25.50	
12500.00	11305.00	13894.10	181.43	55.47	27.12	1295.41	1243.45	24.93	
12600.00	11305.00	13994.10	181.40	57.12	27.64	1295.39	1242.38	24.44	
12700.00	11305.00	14094.09	181.37	58.77	28.11	1295.37	1241.33	23.97	
12800.00	11305.00	14194.09	181.34	60.43	28.73	1295.36	1240.07	23.43	
12900.00	11305.00	14294.09	181.31	62.11	29.33	1295.34	1238.84	22.92	
13000.00	11305.00	14394.09	181.28	63.79	29.92	1295.33	1237.61	22.44	
13100.00	11305.00	14494.08	181.25	65.48	30.50	1295.31	1236.39	21.98	
13200.00	11305.00	14594.08	181.22	67.17	31.08	1295.30	1235.17	21.54	
13300.00	11305.00	14694.08	181.19	68.88	31.67	1295.28	1233.94	21.11	
13400.00	11305.00	14794.08	181.17	70.59	32.25	1295.27	1232.70	20.70	
13500.00	11305.00	14894.08	181.14	72.30	32.84	1295.26	1231.46	20.30	
13600.00	11305.00	14994.07	181.11	74.02	33.43	1295.24	1230.21	19.92	
13700.00	11305.00	15094.07	181.08	75.75	34.03	1295.23	1228.95	19.54	
13800.00	11305.00	15194.07	181.05	77.48	34.63	1295.22	1227.69	19.18	
13900.00	11305.00	15294.07	181.02	79.22	35.24	1295.21	1226.41	18.83	
14000.00	11305.00	15394.06	180.99	80.96	35.85	1295.19	1225.14	18.49	
14100.00	11305.00	15494.06	180.96	82.70	36.49	1295.18	1223.83	18.15	
14200.00	11305.00	15594.06	180.93	84.45	37.14	1295.17	1222.51	17.82	
14300.00	11305.00	15694.06	180.90	86.20	37.78	1295.16	1221.18	17.51	
14400.00	11305.00	15794.06	180.87	87.95	38.44	1295.15	1219.85	17.20	
14500.00	11305.00	15894.05	180.84	89.71	39.09	1295.14	1218.52	16.90	
14600.00	11305.00	15994.05	180.81	91.47	39.74	1295.13	1217.18	16.61	
14700.00	11305.00	16094.05	180.78	93.23	40.40	1295.12	1215.84	16.33	
14800.00	11305.00	16194.05	180.75	94.99	41.06	1295.11	1214.49	16.06	
14900.00	11305.00	16294.04	180.72	96.76	41.72	1295.10	1213.14	15.80	
15000.00	11305.00	16394.04	180.69	98.53	42.39	1295.10	1211.79	15.55	
15100.00	11305.00	16494.04	180.66	100.30	43.05	1295.09	1210.43	15.30	
15200.00	11305.00	16594.04	180.63	102.07	43.72	1295.08	1209.07	15.06	
15300.00	11305.00	16694.04	180.60	103.85	44.39	1295.07	1207.71	14.82	
15400.00	11305.00	16794.03	180.57	105.63	45.06	1295.07	1206.34	14.60	
15500.00	11305.00	16894.03	180.54	107.41	45.74	1295.06	1204.97	14.38	
15600.00	11305.00	16994.03	180.51	109.19	46.41	1295.05	1203.60	14.16	
15700.00	11305.00	17094.03	180.48	110.97	47.09	1295.05	1202.23	13.95	
15800.00	11305.00	17194.02	180.46	112.75	47.77	1295.04	1200.85	13.75	
15900.00	11305.00	17294.02	180.43	114.54	48.45	1295.04	1199.47	13.55	
16000.00	11305.00	17394.02	180.40	116.32	49.13	1295.03	1198.09	13.36	
16100.00	11305.00	17494.02	180.37	118.11	49.81	1295.03	1196.70	13.17	
16200.00	11305.00	17594.02	180.34	119.90	50.49	1295.02	1195.32	12.99	
16300.00	11305.00	17694.01	180.31	121.69	51.18	1295.02	1193.93	12.81	
16400.00	11305.00	17794.01	180.28	123.48	51.87	1295.02	1192.54	12.64	
16500.00	11305.00	17894.01	180.25	125.28	52.55	1295.01	1191.15	12.47	
16600.00	11305.00	17994.01	180.22	127.07	53.24	1295.01	1189.76	12.30	
16700.00	11305.00	18094.00	180.19	128.86	53.93	1295.01	1188.36	12.14	
16800.00	11305.00	18194.00	180.16	130.66	54.62	1295.01	1186.96	11.99	
16900.00	11305.00	18294.00	180.13	132.46	55.31	1295.00	1185.57	11.83	
17000.00	11305.00	18394.00	180.10	134.25	56.01	1295.00	1184.17	11.68	
17100.00	11305.00	18493.99	180.07	136.05	56.70	1295.00	1182.77	11.54	
17200.00	11305.00	18593.99	180.04	137.85	57.40	1295.00	1181.36	11.40	
17300.00	11305.00	18693.99	180.01	139.65	58.09	1295.00	1179.96	11.26	
17338.89	11305.00	18732.88	180.00	140.35	58.36	1295.00	1179.42	11.20	

SD Anti-Collision Report

Secondary Well : Rio Blanco 4-33 Fed Com 1H (p) (TVD Relative to Kelly Bushing (Primary) ; All Azimuth Relative to GRID NORTH)									
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	CC (US ft)	ES (US ft)	SF	Risk
0.00	1.00	0.00	269.58	0.00	0.00	100.04	99.47	176.54	
100.00	100.00	99.00	269.58	0.11	0.11	100.03	99.25	127.15	
200.00	200.00	199.00	269.58	0.34	0.34	100.03	98.80	80.98	
300.00	300.00	299.00	269.58	0.56	0.56	100.03	98.35	59.38	
400.00	400.00	399.00	269.58	0.78	0.78	100.03	97.90	46.88	
500.00	500.00	499.00	269.58	1.01	1.01	100.03	97.45	38.72	
600.00	600.00	599.00	269.58	1.23	1.23	100.03	97.00	32.98	
700.00	700.00	699.00	269.58	1.46	1.46	100.03	96.55	28.72	
800.00	800.00	799.00	269.58	1.68	1.68	100.03	96.10	25.44	
900.00	900.00	899.00	269.58	1.91	1.91	100.03	95.65	22.83	
1000.00	1000.00	999.00	269.58	2.13	2.13	100.03	95.20	20.71	
1100.00	1100.00	1099.00	269.58	2.36	2.36	100.03	94.75	18.94	
1200.00	1200.00	1199.00	269.58	2.58	2.58	100.03	94.30	17.46	
1300.00	1300.00	1299.00	269.58	2.81	2.81	100.03	93.85	16.19	
1400.00	1400.00	1399.00	269.58	3.03	3.03	100.03	93.40	15.09	
1500.00	1500.00	1499.00	269.58	3.26	3.26	100.03	92.95	14.13	
1600.00	1600.00	1599.00	269.58	3.48	3.48	100.03	92.50	13.29	
1700.00	1700.00	1699.00	269.58	3.71	3.71	100.03	92.05	12.54	
1800.00	1800.00	1799.00	269.58	3.93	3.93	100.03	91.61	11.87	
1900.00	1900.00	1899.00	269.58	4.16	4.16	100.03	91.16	11.27	
2000.00	2000.00	1999.00	269.58	4.38	4.38	100.03	90.71	10.73	
2100.00	2100.00	2099.00	269.58	4.61	4.61	100.03	90.26	10.23	
2200.00	2200.00	2199.00	269.58	4.83	4.83	100.03	89.81	9.78	
2300.00	2300.00	2299.00	269.58	5.06	5.06	100.03	89.36	9.37	
2400.00	2400.00	2399.00	269.58	5.28	5.28	100.03	88.91	8.99	
2500.00	2500.00	2499.00	269.58	5.51	5.51	100.03	88.46	8.64	
2600.00	2600.00	2599.00	269.58	5.73	5.73	100.03	88.01	8.32	
2700.00	2700.00	2699.00	269.58	5.95	5.95	100.03	87.56	8.02	
2800.00	2800.00	2799.00	269.58	6.18	6.18	100.03	87.11	7.74	
2900.00	2900.00	2899.00	269.58	6.40	6.40	100.03	86.66	7.48	
3000.00	3000.00	2999.00	269.58	6.63	6.63	100.03	86.21	7.24	
3100.00	3100.00	3099.00	269.58	6.85	6.85	100.03	85.76	7.01	
3200.00	3200.00	3199.00	269.58	7.08	7.08	100.03	85.31	6.80	
3300.00	3300.00	3299.00	269.58	7.30	7.30	100.03	84.86	6.59	
3400.00	3400.00	3399.00	269.58	7.53	7.53	100.03	84.41	6.40	
3500.00	3500.00	3499.00	269.58	7.75	7.75	100.03	83.96	6.22	
3600.00	3600.00	3599.00	269.58	7.98	7.98	100.03	83.51	6.06	
3700.00	3700.00	3699.00	269.58	8.20	8.20	100.03	83.06	5.89	
3800.00	3800.00	3799.00	269.58	8.43	8.43	100.03	82.61	5.74	
3900.00	3900.00	3899.00	269.58	8.65	8.65	100.03	82.16	5.60	
4000.00	4000.00	3999.00	269.58	8.88	8.88	100.03	81.71	5.46	
4100.00	4100.00	4099.00	269.58	9.10	9.10	100.03	81.27	5.33	
4200.00	4200.00	4199.00	269.58	9.33	9.33	100.03	80.82	5.21	
4300.00	4300.00	4299.00	269.58	9.55	9.55	100.03	80.37	5.09	
4400.00	4400.00	4399.00	269.58	9.78	9.78	100.03	79.92	4.97	
4500.00	4500.00	4499.00	269.58	10.00	10.00	100.03	79.47	4.86	
4600.00	4600.00	4599.00	269.58	10.23	10.23	100.03	79.02	4.76	
4700.00	4700.00	4699.00	269.58	10.45	10.45	100.03	78.57	4.66	
4800.00	4800.00	4799.00	269.58	10.68	10.68	100.03	78.12	4.56	
4900.00	4900.00	4899.00	269.58	10.90	10.90	100.03	77.67	4.47	
5000.00	5000.00	4999.00	269.58	11.12	11.12	100.03	77.22	4.38	
5100.00	5100.00	5099.00	269.58	11.35	11.35	100.03	76.77	4.30	
5200.00	5200.00	5199.00	269.58	11.57	11.57	100.03	76.32	4.22	
5300.00	5300.00	5299.00	269.58	11.80	11.80	100.03	75.87	4.14	
5400.00	5400.00	5399.00	269.58	12.02	12.02	100.03	75.42	4.06	
5500.00	5500.00	5499.00	269.58	12.25	12.25	100.03	74.97	3.99	
5600.00	5600.00	5599.00	269.58	12.47	12.47	100.03	74.52	3.92	
5700.00	5700.00	5699.00	269.58	12.70	12.70	100.03	74.07	3.85	

SD Anti-Collision Report

Secondary Well : Rio Blanco 4-33 Fed Com 1H (p) (TVD Relative to Kelly Bushing (Primary) ; All Azimuth Relative to GRID NORTH)									
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	CC (US ft)	ES (US ft)	SF	Risk
5800.00	5800.00	5799.00	269.58	12.92	12.92	100.03	73.62	3.79	
5900.00	5900.00	5899.00	269.58	13.15	13.15	100.03	73.17	3.72	
6000.00	6000.00	5999.00	269.58	13.37	13.37	100.03	72.72	3.66	
6100.00	6100.00	6099.00	269.58	13.60	13.60	100.03	72.27	3.60	
6200.00	6200.00	6199.00	269.58	13.82	13.82	100.03	71.82	3.55	
6300.00	6300.00	6299.00	269.58	14.05	14.05	100.03	71.37	3.49	
6400.00	6400.00	6399.00	269.58	14.27	14.27	100.03	70.93	3.44	
6500.00	6500.00	6499.00	269.58	14.50	14.50	100.03	70.48	3.38	
6600.00	6600.00	6599.00	269.58	14.72	14.72	100.03	70.03	3.33	
6700.00	6700.00	6699.00	269.58	14.95	14.95	100.03	69.58	3.28	
6800.00	6800.00	6799.00	269.58	15.17	15.17	100.03	69.13	3.24	
6900.00	6900.00	6899.00	269.58	15.40	15.40	100.03	68.68	3.19	
7000.00	7000.00	6999.00	269.58	15.62	15.62	100.03	68.23	3.15	
7100.00	7100.00	7099.00	269.58	15.85	15.85	100.03	67.78	3.10	
7200.00	7200.00	7199.00	269.58	16.07	16.07	100.03	67.33	3.06	
7300.00	7300.00	7299.00	269.58	16.29	16.29	100.03	66.88	3.02	
7400.00	7400.00	7399.00	269.58	16.52	16.52	100.03	66.43	2.98	
7500.00	7500.00	7499.00	269.58	16.74	16.74	100.03	65.98	2.94	
7600.00	7600.00	7599.00	269.58	16.97	16.97	100.03	65.53	2.90	
7700.00	7700.00	7699.00	269.58	17.19	17.19	100.03	65.08	2.86	
7800.00	7800.00	7799.00	269.58	17.42	17.42	100.03	64.63	2.83	
7900.00	7900.00	7899.00	269.58	17.64	17.64	100.03	64.18	2.79	
8000.00	8000.00	7999.00	269.58	17.87	17.87	100.03	63.73	2.76	
8100.00	8100.00	8099.00	269.58	18.09	18.09	100.03	63.28	2.72	
8200.00	8200.00	8199.00	269.58	18.32	18.32	100.03	62.83	2.69	
8300.00	8299.53	8298.71	272.14	18.54	18.39	100.10	62.47	2.66	
8400.00	8392.93	8394.30	283.22	18.74	18.26	103.00	65.05	2.71	
8500.00	8473.98	8481.24	298.68	18.93	17.78	116.97	79.09	3.09	
8600.00	8540.30	8557.28	312.55	19.10	17.24	148.35	111.57	4.03	
8700.00	8592.60	8622.18	322.46	19.28	16.62	196.21	160.78	5.54	
8800.00	8633.08	8676.90	329.07	19.45	16.07	256.43	222.28	7.51	
8900.00	8664.26	8722.86	333.50	19.61	15.53	325.40	292.47	9.88	
9000.00	8688.33	8761.55	336.58	19.76	15.14	400.66	368.57	12.49	
9100.00	8707.06	8794.28	338.79	19.88	14.76	480.53	449.11	15.29	
9200.00	8721.78	8822.17	340.43	20.02	14.43	563.89	533.05	18.29	
9300.00	8733.49	8846.10	341.68	20.14	14.21	649.92	619.43	21.31	
9400.00	8742.90	8866.79	342.67	20.24	14.00	738.06	707.84	24.43	
9500.00	8751.08	8886.09	347.07	20.34	13.79	826.34	796.40	27.60	
9600.00	8759.84	8908.55	350.32	20.46	13.57	908.31	878.63	30.61	
9700.00	8768.72	8933.80	352.27	20.62	13.38	982.22	952.78	33.37	
9800.00	8777.16	8961.19	353.51	20.79	13.15	1047.06	1017.96	35.98	
9900.00	8784.74	8990.21	354.34	20.97	12.95	1101.99	1073.14	38.19	
10000.00	8791.11	9020.46	354.90	21.18	12.80	1146.37	1117.71	40.00	
10100.00	8796.04	9051.58	355.27	21.42	12.65	1179.68	1151.20	41.43	
10200.00	8799.33	9083.30	355.50	21.65	12.60	1201.55	1173.08	42.20	
10300.00	8800.88	9115.35	355.61	21.89	12.54	1211.74	1183.21	42.47	
10400.00	8801.00	9190.66	355.67	22.54	12.70	1212.47	1183.65	42.07	
10500.00	8801.00	9290.65	355.73	23.49	12.94	1212.37	1183.11	41.44	
10600.00	8801.00	9390.64	355.79	24.53	13.21	1212.27	1182.50	40.73	
10700.00	8801.00	9490.64	355.85	25.67	13.52	1212.17	1181.84	39.95	
10800.00	8801.00	9590.63	355.92	26.88	13.86	1212.08	1181.11	39.13	
10900.00	8801.00	9690.62	355.98	28.15	14.23	1211.99	1180.32	38.27	
11000.00	8801.00	9790.61	356.04	29.49	14.62	1211.89	1179.48	37.39	
11100.00	8801.00	9890.60	356.10	30.87	15.04	1211.80	1178.60	36.50	
11200.00	8801.00	9990.59	356.16	32.30	15.48	1211.71	1177.67	35.59	
11300.00	8801.00	10090.58	356.23	33.77	15.95	1211.63	1176.70	34.69	
11400.00	8801.00	10190.57	356.29	35.27	16.43	1211.54	1175.70	33.80	
11500.00	8801.00	10290.57	356.35	36.80	16.93	1211.46	1174.65	32.92	

SD Anti-Collision Report

Secondary Well : Rio Blanco 4-33 Fed Com 1H (p) (TVD Relative to Kelly Bushing (Primary) ; All Azimuth Relative to GRID NORTH)									
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	CC (US ft)	ES (US ft)	SF	Risk
11600.00	8801.00	10390.56	356.41	38.36	17.43	1211.37	1173.58	32.05	
11700.00	8801.00	10490.55	356.48	39.94	17.95	1211.29	1172.47	31.20	
11800.00	8801.00	10590.54	356.54	41.54	18.53	1211.21	1171.34	30.38	
11900.00	8801.00	10690.53	356.60	43.16	19.12	1211.13	1170.19	29.58	
12000.00	8801.00	10790.52	356.66	44.79	19.66	1211.05	1169.07	28.85	
12100.00	8801.00	10890.51	356.73	46.44	20.27	1210.98	1167.86	28.08	
12200.00	8801.00	10990.50	356.79	48.10	20.84	1210.90	1166.64	27.36	
12300.00	8801.00	11090.50	356.85	49.78	21.42	1210.83	1165.46	26.69	
12400.00	8801.00	11190.49	356.91	51.46	22.05	1210.76	1164.21	26.01	
12500.00	8801.00	11290.48	356.97	53.15	22.68	1210.69	1162.96	25.36	
12600.00	8801.00	11390.47	357.04	54.85	23.31	1210.62	1161.73	24.76	
12700.00	8801.00	11490.46	357.10	56.56	23.94	1210.55	1160.48	24.18	
12800.00	8801.00	11590.45	357.16	58.28	24.58	1210.48	1159.17	23.59	
12900.00	8801.00	11690.44	357.22	60.00	25.22	1210.42	1157.85	23.03	
13000.00	8801.00	11790.44	357.29	61.73	25.86	1210.36	1156.53	22.49	
13100.00	8801.00	11890.43	357.35	63.47	26.51	1210.30	1155.21	21.97	
13200.00	8801.00	11990.42	357.41	65.21	27.17	1210.23	1153.89	21.48	
13300.00	8801.00	12090.41	357.47	66.95	27.83	1210.18	1152.55	21.00	
13400.00	8801.00	12190.40	357.54	68.70	28.49	1210.12	1151.22	20.54	
13500.00	8801.00	12290.39	357.60	70.45	29.15	1210.06	1149.88	20.11	
13600.00	8801.00	12390.38	357.66	72.21	29.82	1210.01	1148.53	19.68	
13700.00	8801.00	12490.37	357.72	73.97	30.49	1209.95	1147.18	19.28	
13800.00	8801.00	12590.37	357.79	75.73	31.17	1209.90	1145.83	18.88	
13900.00	8801.00	12690.36	357.85	77.50	31.84	1209.85	1144.47	18.51	
14000.00	8801.00	12790.35	357.91	79.26	32.52	1209.80	1143.10	18.14	
14100.00	8801.00	12890.34	357.97	81.04	33.20	1209.76	1141.72	17.78	
14200.00	8801.00	12990.33	358.04	82.81	33.89	1209.71	1140.32	17.43	
14300.00	8801.00	13090.32	358.10	84.58	34.57	1209.67	1138.92	17.10	
14400.00	8801.00	13190.31	358.16	86.36	35.26	1209.62	1137.52	16.78	
14500.00	8801.00	13290.30	358.22	88.14	35.95	1209.58	1136.12	16.47	
14600.00	8801.00	13390.30	358.29	89.92	36.64	1209.54	1134.72	16.16	
14700.00	8801.00	13490.29	358.35	91.71	37.33	1209.50	1133.31	15.87	
14800.00	8801.00	13590.28	358.41	93.49	38.03	1209.46	1131.90	15.59	
14900.00	8801.00	13690.27	358.47	95.28	38.72	1209.43	1130.49	15.32	
15000.00	8801.00	13790.26	358.54	97.07	39.42	1209.39	1129.07	15.06	
15100.00	8801.00	13890.25	358.60	98.86	40.12	1209.36	1127.66	14.80	
15200.00	8801.00	13990.24	358.66	100.65	40.82	1209.33	1126.24	14.55	
15300.00	8801.00	14090.23	358.72	102.44	41.52	1209.30	1124.82	14.31	
15400.00	8801.00	14190.23	358.79	104.24	42.22	1209.27	1123.40	14.08	
15500.00	8801.00	14290.22	358.85	106.03	42.92	1209.24	1121.98	13.86	
15600.00	8801.00	14390.21	358.91	107.83	43.63	1209.22	1120.56	13.64	
15700.00	8801.00	14490.20	358.97	109.62	44.33	1209.19	1119.14	13.43	
15800.00	8801.00	14590.19	359.04	111.42	45.04	1209.17	1117.71	13.22	
15900.00	8801.00	14690.18	359.10	113.22	45.74	1209.15	1116.29	13.02	
16000.00	8801.00	14790.17	359.16	115.02	46.45	1209.13	1114.87	12.83	
16100.00	8801.00	14890.16	359.22	116.82	47.16	1209.11	1113.44	12.64	
16200.00	8801.00	14990.16	359.29	118.62	47.87	1209.09	1112.02	12.46	
16300.00	8801.00	15090.15	359.35	120.42	48.58	1209.08	1110.59	12.28	
16400.00	8801.00	15190.14	359.41	122.23	49.29	1209.06	1109.17	12.10	
16500.00	8801.00	15290.13	359.48	124.03	50.00	1209.05	1107.74	11.93	
16600.00	8801.00	15390.12	359.54	125.84	50.71	1209.04	1106.32	11.77	
16700.00	8801.00	15490.11	359.60	127.64	51.42	1209.03	1104.89	11.61	
16800.00	8801.00	15590.10	359.66	129.45	52.14	1209.02	1103.47	11.45	
16900.00	8801.00	15690.10	359.73	131.25	52.85	1209.01	1102.04	11.30	
17000.00	8801.00	15790.09	359.79	133.06	53.56	1209.01	1100.62	11.15	
17100.00	8801.00	15890.08	359.85	134.87	54.28	1209.00	1099.19	11.01	
17200.00	8801.00	15990.07	359.91	136.67	54.99	1209.00	1097.77	10.87	
17300.00	8801.00	16090.06	359.98	138.48	55.71	1209.00	1096.34	10.73	

5D Anti-Collision Report

Secondary Well : Rio Blanco 4-33 Fed Com 1H (p) (TVD Relative to Kelly Bushing (Primary) ; All Azimuth Relative to GRID NORTH)									
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	CC (US ft)	ES (US ft)	SF	Risk
17338.89	8801.00	16128.94	0.00	139.18	55.99	1209.00	1095.79	10.68	



Weatherford

Weatherford Drilling Services

GeoDec4 v2.1.0.0

Report Date: March 05, 2015
Job Number: _____
Customer: Devon Energy
Well Name: Rio Blanco 4-33 Fed Com 3H
API Number: _____
Rig Name: _____
Location: Lea Co, NM Nad83 NME
Block: _____
Engineer: RWJ

NAD83 / New Mexico East (ftUS)	NAD83 (1986)
Projected Coordinate System	Geodetic Coordinate System
Datum: North American Datum 1983 (1986)	Datum: North American Datum 1983 (1986)
Ellipsoid: GRS 1980	Ellipsoid: GRS 1980
EPSG: 2257	EPSG: 4269
North: 486169.03 US Survey Foot	Latitude: 32.33368 Degree
East: 804186.97 US Survey Foot	Longitude: -103.482316 Degree
Convergence: 0.46°	
Declination: 7.23°	
Total Correction: 6.77°	
Datum Transformation: none	

Geodetic Location WGS84

MSL Elevation = 0 m
Latitude = 32° 20' 01.25" N
Longitude = 103° 28' 56.34" W

Magnetic Declination = 7.23 deg	[True North Offset]
Local Gravity = .9988 g	Checksum = 6695
Local Field Strength = 48247 nT	Magnetic Vector X = 23792 nT
Magnetic Dip = 60.19 deg	Magnetic Vector Y = 3018 nT
Magnetic Model = bggm2014.dat	Magnetic Vector Z = 41864 nT
Run Date = July 30, 2015	Magnetic Vector H = 23983 nT

Signed: _____ Date: _____

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