

HOBBS OGD

NOV 07 2011

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DISTRICT I
1923 N. French Dr., Hobbs, NM 88210DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505State of New Mexico
Energy, Minerals and Natural Resources DepartmentForm C-102
Revised July 18, 2010Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Teas; Bone Spring, Wildcat

□ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-40354	Pool Code 96403	Pool Name Teas; Bone Spring, Wildcat
Property Code 38859	Property Name WITHERSPOON "21" STATE	Well Number 2H
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3686'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	21	21 S	33 E		330	NORTH	1650	WEST	LEA

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	21	21 S	33 E		330	SOUTH	1650	WEST	LEA
Dedicated Acres 160	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

	SURFACE LOCATION Lot - N 32°28'14.62" Long - W 103°34'50.66" MNSPCE - 4 535799.8 773444.8 (NAD-83)	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order previously entered by the division. Signature <i>Terri Stathem</i> Date _____ Printed Name terri.stathem@cimarex.com Email Address _____
	PROPOSED BOTTOM HOLE LOCATION Lot - N 32°27'28.91" Long - W 103°34'50.66" MNSPCE - 4 531181.0 773462.5 (NAD-83)	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. Date Surveyed _____ Signature & Seal of Professional Surveyor <i>Gary L. Jones</i> W. G. JONES CERTIFIED SURVEYOR STATE OF NEW MEXICO No. 10000
		Certificate No. Gary L. Jones 7977 BASIN SURVEYS 25033

DEC 08 2011



Cimarex Energy Co.

Location: Lea County, NM
Field: (Witherspoon) Sec 21, T21S, R33E
Facility: Witherspoon 21 State Com

Slot: No. 2H SHL
Well: No. 2H
Wellbore: No. 2H PWB

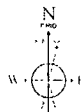


Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (%/100ft)	VS (ft)
Tie On	0.00	0.000	179.530	0.00	0.00	0.00	0.00	0.00
Est. KOP	9388.52	0.000	179.530	9388.52	0.00	0.00	0.00	0.00
End of Curve	9838.52	90.000	179.530	9675.00	-286.47	2.35	20.00	286.48
No. 2H PBHL	14171.14	90.000	179.530	9675.00	-4618.94	37.90	0.00	4619.10

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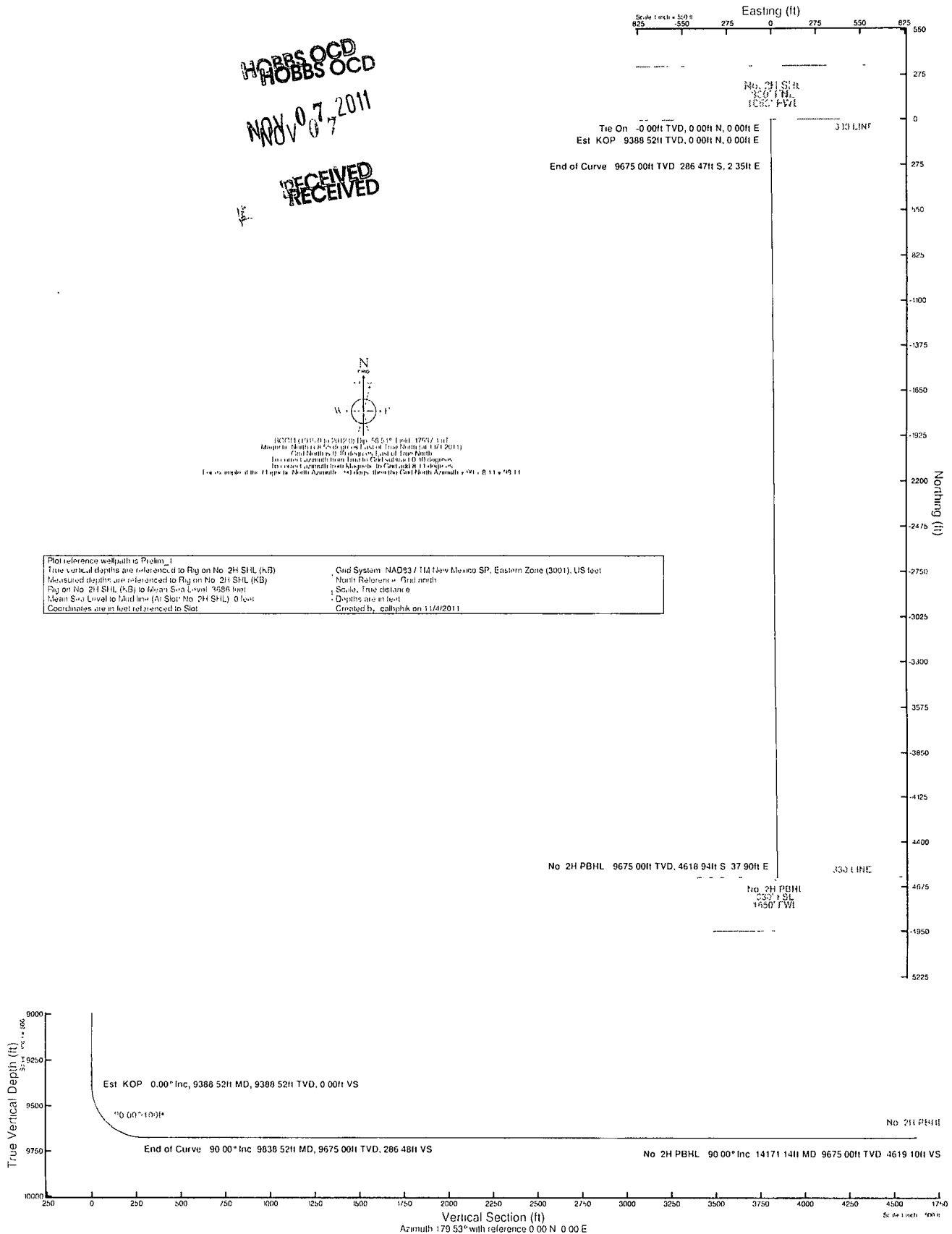
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HOOD 11/07/2011 09:00:00 AM 58.51° E 179.53° S
Maple is 100% of the ground level of the 100 ft (30.48 m) well.
Grid North is 100% of the ground level of the 100 ft (30.48 m) well.
The correct azimuth from true to grid is 179.53 degrees.
The correct azimuth from true to grid is 179.53 degrees.

Plot reference wellpath is PWBHL
True vertical depths are referenced to Rig on No. 2H SHL (KB)
Measured depths are referenced to Rig on No. 2H SHL (KB)
Rig on No. 2H SHL (KB) to Mean Sea Level: 3586 feet
Mean Sea Level to Mud line (At Slot No. 2H SHL): 0 feet
Coordinates are in feet referenced to Slot

Grid System: NAD83 / 114 New Mexico SP, Eastern Zone (3001), US feet
North Reference: Grid North
Scale: True distance
Depths are in feet
Created by: callphik on 11/07/2011





Planned Wellpath Report

Prelim_1

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(Witherspoon) Sec 21, T21S, R33E	Wellbore	No. 2H PWB
Facility	Witherspoon 21 State Com		

REPORT SETUP INFORMATION			
Projection System	NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect@ 3.0.0
North Reference	Grid	User	Calhphik
Scale	0.999971	Report Generated	11/4/2011 at 10:12:17 AM
Convergence at slot	0.40° East	Database/Source file	WA_Midland/No._2H_PWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	535669.73	773256.84	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W
Facility Reference Pt			0.00	0.00	30°59'18.404"N	106°03'38.987"W
Field Reference Pt			0.00	0.00	30°59'18.404"N	106°03'38.987"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 2H SHL (KB) to GL	3686.00ft
Horizontal Reference Pt	Slot	Rig on No. 2H SHL (KB) to Mean Sea Level	3686.00ft
Vertical Reference Pt	Rig on No. 2H SHL (KB)	Rig on No. 2H SHL (KB) to Mud Line at Slot (No. 2H SHL)	3686.00ft
MD Reference Pt	Rig on No. 2H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.53°



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(Witherspoon) Sec 21, T21S, R33E	Wellbore	No. 2H PWB
Facility	Witherspoon 21 State Com		

WELLPATH DATA (148 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [1"/100ft]	Comments
0 00	0.000	179.530	0.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	Tie On
100 00	0.000	179.530	100.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
200 00	0.000	179.530	200.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
300 00	0.000	179.530	300.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
400 00	0.000	179.530	400.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
500 00	0.000	179.530	500.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
600 00	0.000	179.530	600.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
700 00	0.000	179.530	700.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
800 00	0.000	179.530	800.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
900 00	0.000	179.530	900.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
1000 00	0.000	179.530	1000.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
1100 00	0.000	179.530	1100.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
1200 00	0.000	179.530	1200.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
1300 00	0.000	179.530	1300.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
1400 00	0.000	179.530	1400.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
1500 00	0.000	179.530	1500.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
1600 00	0.000	179.530	1600.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
1700 00	0.000	179.530	1700.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
1800 00	0.000	179.530	1800.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
1900 00	0.000	179.530	1900.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
2000 00	0.000	179.530	2000.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
2100 00	0.000	179.530	2100.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
2200 00	0.000	179.530	2200.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
2300 00	0.000	179.530	2300.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
2400 00	0.000	179.530	2400.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
2500 00	0.000	179.530	2500.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
2600 00	0.000	179.530	2600.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
2700 00	0.000	179.530	2700.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
2800 00	0.000	179.530	2800.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
2900 00	0.000	179.530	2900.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
3000 00	0.000	179.530	3000.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
3100 00	0.000	179.530	3100.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
3200 00	0.000	179.530	3200.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
3300 00	0.000	179.530	3300.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
3400 00	0.000	179.530	3400.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
3500 00	0.000	179.530	3500.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
3600 00	0.000	179.530	3600.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
3700 00	0.000	179.530	3700.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
3800 00	0.000	179.530	3800.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
3900 00	0.000	179.530	3900.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
4000 00	0.000	179.530	4000.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
4100 00	0.000	179.530	4100.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
4200 00	0.000	179.530	4200.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
4300 00	0.000	179.530	4300.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
4400 00	0.000	179.530	4400.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(Witherspoon) Sec 21, T21S, R33E	Wellbore	No. 2H PWB
Facility	Witherspoon 21 State Com		

WELLPATH DATA (148 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4500.00†	0.000	179.530	4500.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
4600.00†	0.000	179.530	4600.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
4700.00†	0.000	179.530	4700.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
4800.00†	0.000	179.530	4800.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
4900.00†	0.000	179.530	4900.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
5000.00†	0.000	179.530	5000.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
5100.00†	0.000	179.530	5100.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
5200.00†	0.000	179.530	5200.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
5250.00†	0.000	179.530	5250.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	Delaware
5300.00†	0.000	179.530	5300.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
5400.00†	0.000	179.530	5400.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
5500.00†	0.000	179.530	5500.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
5600.00†	0.000	179.530	5600.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
5700.00†	0.000	179.530	5700.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
5800.00†	0.000	179.530	5800.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
5900.00†	0.000	179.530	5900.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
6000.00†	0.000	179.530	6000.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
6100.00†	0.000	179.530	6100.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
6200.00†	0.000	179.530	6200.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
6300.00†	0.000	179.530	6300.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
6400.00†	0.000	179.530	6400.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
6500.00†	0.000	179.530	6500.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
6600.00†	0.000	179.530	6600.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
6700.00†	0.000	179.530	6700.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
6800.00†	0.000	179.530	6800.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
6900.00†	0.000	179.530	6900.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
7000.00†	0.000	179.530	7000.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
7100.00†	0.000	179.530	7100.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
7200.00†	0.000	179.530	7200.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
7300.00†	0.000	179.530	7300.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
7400.00†	0.000	179.530	7400.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
7500.00†	0.000	179.530	7500.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
7600.00†	0.000	179.530	7600.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
7700.00†	0.000	179.530	7700.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
7800.00†	0.000	179.530	7800.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
7900.00†	0.000	179.530	7900.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
8000.00†	0.000	179.530	8000.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
8100.00†	0.000	179.530	8100.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
8200.00†	0.000	179.530	8200.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
8300.00†	0.000	179.530	8300.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
8400.00†	0.000	179.530	8400.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
8500.00†	0.000	179.530	8500.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
8575.00†	0.000	179.530	8575.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	Basal Brushy Canyon
8600.00†	0.000	179.530	8600.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
8700.00†	0.000	179.530	8700.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(Witherspoon) Sec 21, T21S, R33E	Wellbore	No. 2H PWB
Facility	Witherspoon 21 State Com		

WELLPATH DATA (148 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8750.00	0.000	179.530	8750.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	Bone Spring
8800.00	0.000	179.530	8800.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
8900.00	0.000	179.530	8900.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
9000.00	0.000	179.530	9000.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
9100.00	0.000	179.530	9100.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
9200.00	0.000	179.530	9200.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	
9300.00	0.000	179.530	9300.00	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	Upper Bone Spring Shale
9388.52	0.000	179.530	9388.52	0.00	0.00	0.00	773444.60	535799.80	32°28'14.617"N	103°34'50.558"W	0.00	Est. KOP
9400.00	2.296	179.530	9400.00	0.23	-0.23	0.00	773444.60	535799.57	32°28'14.615"N	103°34'50.558"W	20.00	
9500.00	22.296	179.530	9497.21	21.42	-21.42	0.18	773444.78	535778.38	32°28'14.405"N	103°34'50.558"W	20.00	
9600.00	42.296	179.530	9581.31	74.58	-74.57	0.61	773445.21	535725.23	32°28'13.879"N	103°34'50.557"W	20.00	
9700.00	62.296	179.530	9642.16	153.29	-153.29	1.26	773445.86	535646.52	32°28'13.100"N	103°34'50.556"W	20.00	
9800.00	82.296	179.530	9672.41	248.07	-248.07	2.04	773446.64	535551.74	32°28'12.162"N	103°34'50.555"W	20.00	
9838.52	90.000	179.530	9675.00	286.48	-286.47	2.35	773446.95	535513.34	32°28'11.782"N	103°34'50.554"W	20.00	End of Curve
9900.00	90.000	179.530	9675.00	347.96	-347.95	2.86	773447.46	535451.86	32°28'11.174"N	103°34'50.553"W	0.00	
10000.00	90.000	179.530	9675.00	447.96	-447.94	3.68	773448.28	535351.87	32°28'10.185"N	103°34'50.552"W	0.00	
10100.00	90.000	179.530	9675.00	547.96	-547.94	4.50	773449.10	535251.88	32°28'09.195"N	103°34'50.551"W	0.00	
10200.00	90.000	179.530	9675.00	647.96	-647.94	5.32	773449.92	535151.88	32°28'08.206"N	103°34'50.549"W	0.00	
10300.00	90.000	179.530	9675.00	747.96	-747.93	6.14	773450.74	535051.89	32°28'07.216"N	103°34'50.548"W	0.00	
10400.00	90.000	179.530	9675.00	847.96	-847.93	6.96	773451.56	534951.90	32°28'06.227"N	103°34'50.547"W	0.00	
10500.00	90.000	179.530	9675.00	947.96	-947.93	7.78	773452.38	534851.90	32°28'05.237"N	103°34'50.545"W	0.00	
10600.00	90.000	179.530	9675.00	1047.96	-1047.92	8.60	773453.20	534751.91	32°28'04.248"N	103°34'50.544"W	0.00	
10700.00	90.000	179.530	9675.00	1147.96	-1147.92	9.42	773454.02	534651.92	32°28'03.258"N	103°34'50.543"W	0.00	
10800.00	90.000	179.530	9675.00	1247.96	-1247.92	10.24	773454.84	534551.92	32°28'02.269"N	103°34'50.541"W	0.00	
10900.00	90.000	179.530	9675.00	1347.96	-1347.91	11.06	773455.66	534451.93	32°28'01.279"N	103°34'50.540"W	0.00	
11000.00	90.000	179.530	9675.00	1447.96	-1447.91	11.88	773456.48	534351.94	32°28'00.290"N	103°34'50.539"W	0.00	
11100.00	90.000	179.530	9675.00	1547.96	-1547.91	12.70	773457.30	534251.94	32°27'59.300"N	103°34'50.537"W	0.00	
11200.00	90.000	179.530	9675.00	1647.96	-1647.90	13.52	773458.12	534151.95	32°27'58.311"N	103°34'50.536"W	0.00	
11300.00	90.000	179.530	9675.00	1747.96	-1747.90	14.34	773458.94	534051.96	32°27'57.321"N	103°34'50.535"W	0.00	
11400.00	90.000	179.530	9675.00	1847.96	-1847.90	15.16	773459.76	533951.96	32°27'56.332"N	103°34'50.533"W	0.00	
11500.00	90.000	179.530	9675.00	1947.96	-1947.89	15.98	773460.58	533851.97	32°27'55.342"N	103°34'50.532"W	0.00	
11600.00	90.000	179.530	9675.00	2047.96	-2047.89	16.80	773461.40	533751.98	32°27'54.353"N	103°34'50.531"W	0.00	
11700.00	90.000	179.530	9675.00	2147.96	-2147.89	17.62	773462.22	533651.98	32°27'53.363"N	103°34'50.529"W	0.00	
11800.00	90.000	179.530	9675.00	2247.96	-2247.88	18.45	773463.04	533551.99	32°27'52.374"N	103°34'50.528"W	0.00	
11900.00	90.000	179.530	9675.00	2347.96	-2347.88	19.27	773463.87	533451.99	32°27'51.385"N	103°34'50.527"W	0.00	
12000.00	90.000	179.530	9675.00	2447.96	-2447.88	20.09	773464.69	533352.00	32°27'50.395"N	103°34'50.525"W	0.00	
12100.00	90.000	179.530	9675.00	2547.96	-2547.87	20.91	773465.51	533252.01	32°27'49.406"N	103°34'50.524"W	0.00	
12200.00	90.000	179.530	9675.00	2647.96	-2647.87	21.73	773466.33	533152.01	32°27'48.416"N	103°34'50.522"W	0.00	
12300.00	90.000	179.530	9675.00	2747.96	-2747.87	22.55	773467.15	533052.02	32°27'47.427"N	103°34'50.521"W	0.00	
12400.00	90.000	179.530	9675.00	2847.96	-2847.86	23.37	773467.97	532952.03	32°27'46.437"N	103°34'50.520"W	0.00	
12500.00	90.000	179.530	9675.00	2947.96	-2947.86	24.19	773468.79	532852.03	32°27'45.448"N	103°34'50.518"W	0.00	
12600.00	90.000	179.530	9675.00	3047.96	-3047.86	25.01	773469.61	532752.04	32°27'44.458"N	103°34'50.517"W	0.00	
12700.00	90.000	179.530	9675.00	3147.96	-3147.85	25.83	773470.43	532652.05	32°27'43.469"N	103°34'50.516"W	0.00	
12800.00	90.000	179.530	9675.00	3247.96	-3247.85	26.65	773471.25	532552.05	32°27'42.479"N	103°34'50.514"W	0.00	
12900.00	90.000	179.530	9675.00	3347.96	-3347.85	27.47	773472.07	532452.06	32°27'41.490"N	103°34'50.513"W	0.00	



Planned Wellpath Report

Prelim_1

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(Witherspoon) Sec 21, T21S, R33E	Wellbore	No. 2H PWB
Facility	Witherspoon 21 State Com		

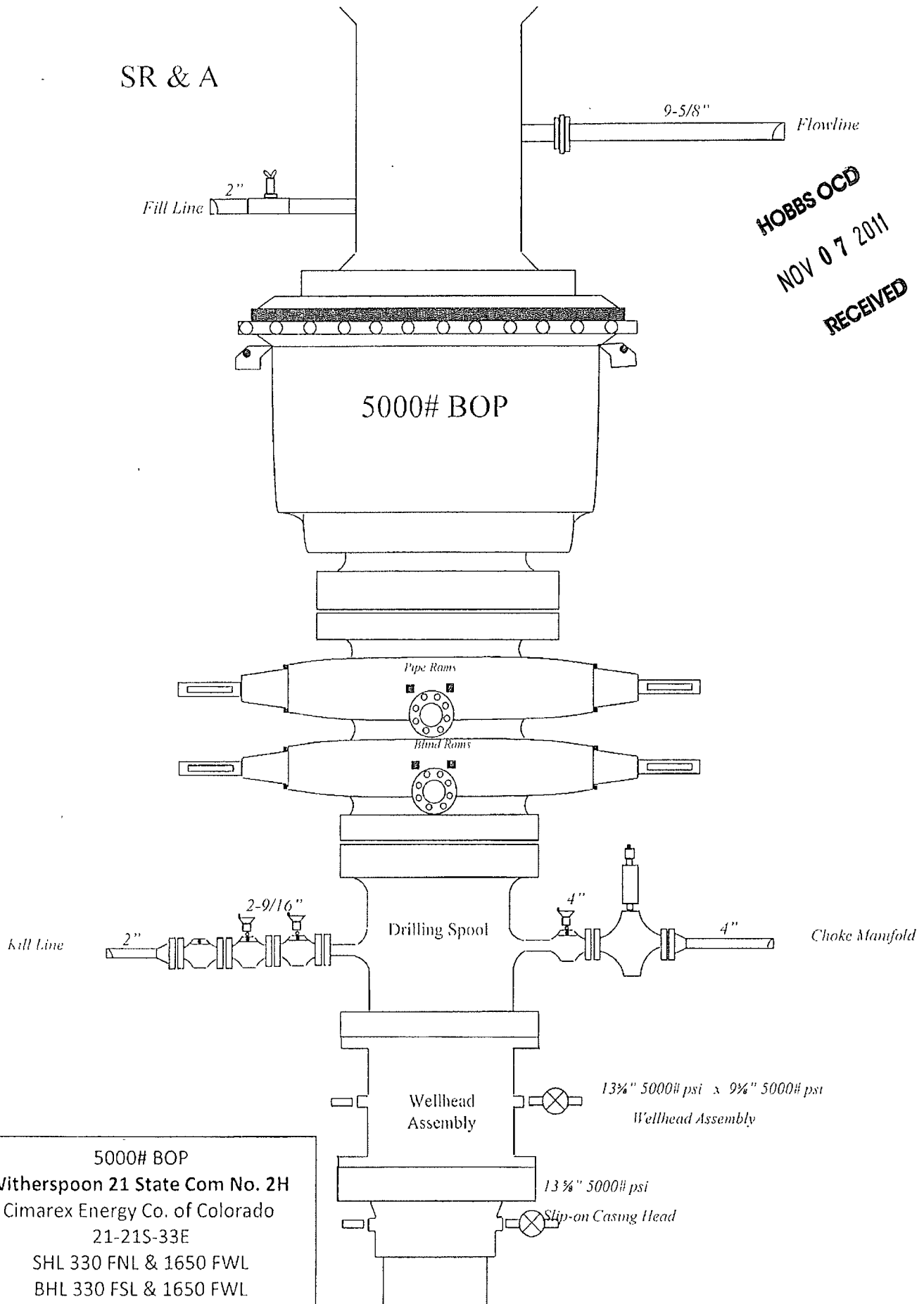
WELLPATH DATA (148 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13000.00†	90.000	179.530	9675.00	3447.96	-3447.84	28.29	773472.89	532352.07	32°27'40.500"N	103°34'50.512"W	0.00	
13100.00†	90.000	179.530	9675.00	3547.96	-3547.84	29.11	773473.71	532252.07	32°27'39.511"N	103°34'50.510"W	0.00	
13200.00†	90.000	179.530	9675.00	3647.96	-3647.83	29.93	773474.53	532152.08	32°27'38.521"N	103°34'50.509"W	0.00	
13300.00†	90.000	179.530	9675.00	3747.96	-3747.83	30.75	773475.35	532052.09	32°27'37.532"N	103°34'50.508"W	0.00	
13400.00†	90.000	179.530	9675.00	3847.96	-3847.83	31.57	773476.17	531952.09	32°27'36.542"N	103°34'50.506"W	0.00	
13500.00†	90.000	179.530	9675.00	3947.96	-3947.82	32.39	773476.99	531852.10	32°27'35.553"N	103°34'50.505"W	0.00	
13600.00†	90.000	179.530	9675.00	4047.96	-4047.82	33.21	773477.81	531752.10	32°27'34.563"N	103°34'50.504"W	0.00	
13700.00†	90.000	179.530	9675.00	4147.96	-4147.82	34.04	773478.63	531652.11	32°27'33.574"N	103°34'50.502"W	0.00	
13800.00†	90.000	179.530	9675.00	4247.96	-4247.81	34.86	773479.45	531552.12	32°27'32.584"N	103°34'50.501"W	0.00	
13900.00†	90.000	179.530	9675.00	4347.96	-4347.81	35.68	773480.28	531452.12	32°27'31.595"N	103°34'50.500"W	0.00	
14000.00†	90.000	179.530	9675.00	4447.96	-4447.81	36.50	773481.10	531352.13	32°27'30.606"N	103°34'50.498"W	0.00	
14100.00†	90.000	179.530	9675.00	4547.96	-4547.80	37.32	773481.92	531252.14	32°27'29.616"N	103°34'50.497"W	0.00	
14171.14	90.000	179.530	9675.00†	4619.10	-4618.94	37.90	773482.50	531181.00	32°27'28.912"N	103°34'50.496"W	0.00	No. 2H PBHL

HOLE & CASING SECTIONS - Ref Wellbore: No. 2H PWB Ref Wellpath: Prelim_1									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
12.25in Open Hole	0.00	5200.00	5200.00	0.00	5200.00	0.00	0.00	0.00	0.00
9.625in Casing	0.00	5200.00	5200.00	0.00	5200.00	0.00	0.00	0.00	0.00
7in Open Hole	5200.00	14171.14	8971.14	5200.00	9675.00	0.00	0.00	-4618.94	37.90
5.5in Casing	0.00	14171.14	14171.14	0.00	9675.00	0.00	0.00	-4618.94	37.90

TARGETS										
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape	
1) No. 2H PBHL	14171.14	9675.00	-4618.94	37.90	773482.50	531181.00	32°27'28.912"N	103°34'50.496"W	point	

SURVEY PROGRAM - Ref Wellbore: No. 2H PWB Ref Wellpath: Prelim_1				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
3686.00	14171.14	NavTrak (Standard)		No. 2H PWB

SR & A



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5000# BOP
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Cimarex Energy Co. of Colorado
21-21S-33E
SHL 330 FNL & 1650 FWL
BHL 330 FSL & 1650 FWL
Lea County NM

Drilling Operations
Choke Manifold
5M Service

Choke Manifold Diagram
Witherspoon 21 State Com No. 2H
Cimarex Energy Co. of Colorado
21-21S-33E
SHL 330 FNL & 1650 FWL
BHL 330 FSL & 1650 FWL
Lea County, NM

