

Submit 1 Copy To Appropriate District Office

District I - (575) 393-6161

District II - (575) 748-1283

District III - (505) 334-6178

District IV - (505) 476-3460

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District VI - (505) 476-3460

District VII - (505) 476-3460

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District X - (505) 476-3460

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District LXXXIII - (505) 476-3460

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District LXXXV - (505) 476-3460

State of New Mexico

Energy, Minerals and Natural Resources

Form C-103

Revised July 18, 2013

RECEIVED

MAR 03 2020

EMNRD-OCD ARTESIA

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

WELL API NO.

30-015-46335

5. Indicate Type of Lease

STATE ☒ FEE ☐

6. State Oil & Gas Lease No.

E0-0701-0009

7. Lease Name or Unit Agreement Name

Parkway 15-14 North State Com

8. Well Number 2H

9. OGRID Number

215099

10. Pool name or Wildcat

Turkey Track; Bone Spring (60660)

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐

2. Name of Operator

Cimarex Energy Co.

3. Address of Operator

600 N. Marienfeld St., Suite 600 Midland, TX 79701

4. Well Location

Unit Letter D : 1230 feet from the North line and 390 feet from the West line

Section 15 Township 19S Range 29E NMPM County Eddy

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

3345' GR

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☒

PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

DOWNHOLE COMMINGLE ☐

CLOSED-LOOP SYSTEM ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ P AND A ☐

CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Cimarex would like to make the following changes:

BHL: 2284' FNL & 100' FEL ✓

Casing Design: Set Surface csg @ 260'

Set Intermediate Csg @ 3110'.

Please see the attached updated C-102, drilling plan and directional surveys.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

TITLE Regulatory Analyst

DATE 03/02/2020

Type or print name Fatima Vasquez

E-mail address: fvasquez@cimarex.com

PHONE: (432) 620-1933

For State Use Only

APPROVED BY:

TITLE

DATE

Conditions of Approval (if any):

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, NM 87505

RECEIVED

MAR 03 2020

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-46335	² Pool Code 60660	³ Pool Name Turkey Track; Bone Spring
⁴ Property Code 323006	⁵ Property Name PARKWAY 15-14 NORTH STATE COM	⁶ Well Number 2H
⁷ OGRID No. 215099	⁸ Operator Name CIMAREX ENERGY CO.	⁹ Elevation 3344.5'

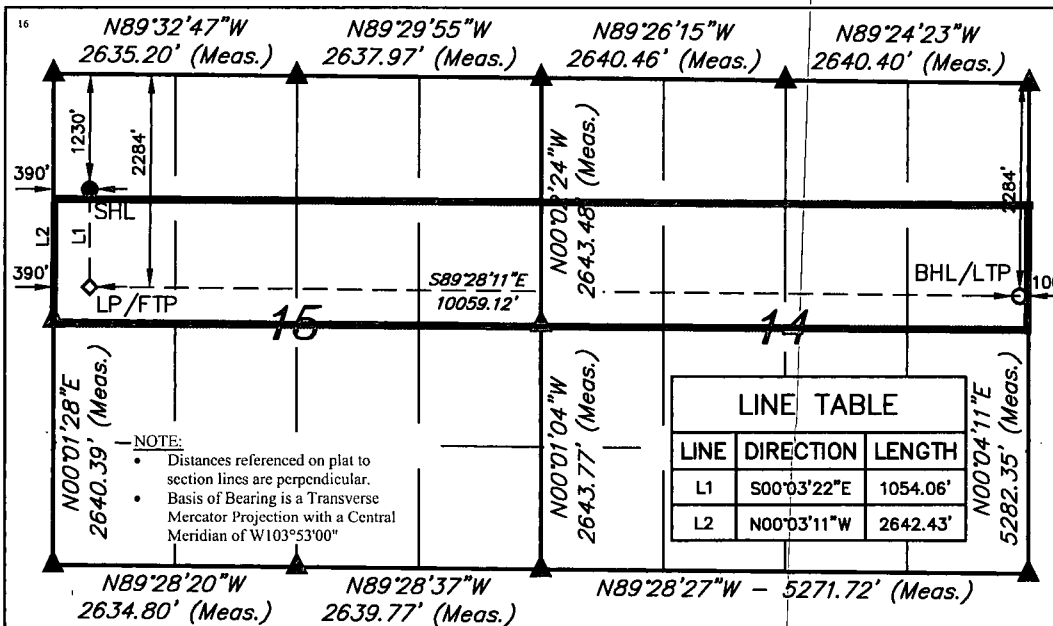
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	15	19S	29E		1230	NORTH	390	WEST	EDDY

¹¹ 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
H	14	19S	29E		2284	NORTH	100	EAST	EDDY
¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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.



¹⁷ 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 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *[Signature]* Date: 02/28/2020

Fatima Vasquez

Printed Name

fvasquez@cimarex.com

E-mail Address

¹⁸ 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.

November 21, 2018

Date of Survey
Signature and Seal of Professional Surveyor:



Certificate Number:

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°39'52.81" (32.664670°)
LONGITUDE = 104°04'11.79" (104.069943°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°39'52.39" (32.664553°)
LONGITUDE = 104°04'09.97" (104.069436°)
STATE PLANE NAD 83 (N.M. EAST)
N: 605638.70' E: 622391.02'
STATE PLANE NAD 27 (N.M. EAST)
N: 605576.35' E: 581211.31'

NAD 83 (LP/FTP)
LATITUDE = 32°39'42.39" (32.661774°)
LONGITUDE = 104°04'11.76" (104.069934°)
NAD 27 (LP/FTP)
LATITUDE = 32°39'41.96" (32.661656°)
LONGITUDE = 104°04'09.94" (104.069427°)
STATE PLANE NAD 83 (N.M. EAST)
N: 604584.88' E: 622396.52'
STATE PLANE NAD 27 (N.M. EAST)
N: 604522.56' E: 581216.79'

NAD 83 (BHL/LTP)
LATITUDE = 32°39'41.62" (32.661562°)
LONGITUDE = 104°02'14.12" (104.037255°)
NAD 27 (BHL/LTP)
LATITUDE = 32°39'41.20" (32.661444°)
LONGITUDE = 104°02'12.30" (104.036749°)
STATE PLANE NAD 83 (N.M. EAST)
N: 604534.44' E: 632453.33'
STATE PLANE NAD 27 (N.M. EAST)
N: 604472.05' E: 591273.59'

- = SURFACE HOLE LOCATION
- ◆ = LANDING POINT/FIRST TAKE POINT
- = BOTTOM HOLE LOCATION/ LAST TAKE POINT
- ▲ = SECTION CORNER LOCATED



SCALE

DRAWN BY: C.M.T. 11-30-18

REV: 2 S.T.O. 02-27-20 (WELLBORE CHANGE)

Handwritten signature and date: 3-18-20

1. Geological Formations

TVD of target 9,090

Pilot Hole TD N/A

MD at TD 18,908

Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	300	N/A	
Top Salt	340	N/A	
Base Salt	930	N/A	
Yates	1200	N/A	
Queen	2140	N/A	
Capitan	3095	N/A	
Delware	3300	N/A	
1st Bone Spring Sand	6950	Hydrocarbons	
2nd Bone Spring Sand	7710	Hydrocarbons	
3rd Bone Spring Sand	8700	Hydrocarbons	

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	260	260	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	6.36	14.88	25.80
12 1/4	0	3110	3110	9-5/8"	36.00	J-55	ST&C	1.25	2.18	3.52
8 3/4	0	8418	8418	7"	29.00	L-80	LT&C	1.74	2.03	3.91
8 3/4	8418	18798	8840	5-1/2"	17.00	L-80	BT&C	1.49	1.83	55.34
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	N
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	N
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	N
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	N
Is 2nd string set 100' to 600' below the base of salt?	N
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	N
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	N
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	N
Is AC Report included?	Y

3. Cementing Program

Casing	# Sks	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	168	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	610	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	182	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	284	10.30	3.64	22.18		Lead: Tuned Light + LCM
	1480	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface		0 25
Intermediate		0 47
Production		3080 25

Cimarex request the ability to perform casing integrity tests after plug bump of cement job.

4. Pressure Control Equipment

	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.				
--	--	--	--	--	--

BOP installed and tested before drilling which hole?	Size	Min Required WP	Type		Tested To
12 1/4	13 5/8	2M	Annular	X	50% of working pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram	X	
			Other		
8 3/4	13 5/8	3M	Annular	X	50% of working pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	X	
			Other		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.				
X	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.				
N	Are anchors required by manufacturer?				

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 260'	FW Spud Mud	8.10 - 8.60	30-32	N/C
260' to 3110'	Brine Water	9.50 - 10.00	30-32	N/C
3110' to 18798'	Cut Brine or OBM	8.70 - 9.20	27-70	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
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6. Logging and Testing Procedures

Logging, Coring and Testing	
X	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No logs are planned based on well control or offset log information.
	Drill stem test?
	Coring?

Additional Logs Planned	Interval
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7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	4229 psi
Abnormal Temperature	No

Hydrogen Sulfide (H₂S) monitors will be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

X	H ₂ S is present
X	H ₂ S plan is attached

8. Other Facets of Operation**9. Wellhead**

A multi-bowl wellhead system will be utilized.

After running the 13-3/8" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 3000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3000 psi test. Annular will be tested to 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2.

The multi-bowl wellhead will be installed by vendor's representative. A copy of the installation instructions has been sent to the BLM field office.

The wellhead will be installed by a third-party welder while being monitored by the wellhead vendor representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 3000 psi.

All casing strings will be tested as per Onshore Order No.2 to atleast 0.22 psi/ft or 1,500 whichever is greater and not to exceed 70% of casing burst.

If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Cimarex Parkway 15-14 North State Com 2H Rev8 RM 28Feb20 Anti-Collision Summary Report

Analysis Date-24hr Time: February 28, 2020 - 15:29
 Client: Cimarex Energy
 Field: NM Eddy County (NAD 83)
 Structure: Cimarex Parkway 15-14 North State Com 2H
 Slot: New Slot
 Well: Parkway 15-14 North State Com 2H
 Borehole: Parkway 15-14 North State Com 2H
 Scan MD Range: 0.00ft - 18908.36ft

Analysis Method: 3D Least Distance
 Reference Trajectory: Cimarex Parkway 15-14 North State Com 2H Rev8 RM 28Feb20 (Def Plan)
 Depth Interval: Every 10.00 Measured Depth (ft)
 Rule Set: NAL Procedure: D&M AntiCollision Standard S002
 Min Pts: All local minima indicated.
 Version / Patch: 2.10.787.0
 Database \ Project: us1153APP452.DIR.SLB.COM\DRILLING-NM Eddy County 2.10

Trajectory Error Model: ISCWSA0 3-D 95.000% Confidence 2.7955 sigma, for subject well. For offset wells, error model version is specified with each well respectively.

Offset Trajectories Summary

Offset Selection Criteria

Wellhead distance scan: Not performed!

Selection filters: Definitive Surveys - Definitive Plans - Definitive surveys exclude definitive plans

- All Non-Def Surveys when no Def-Survey is set in a borehole - All Non-Def Plans when no Def-Plan is set in a borehole

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		

Results highlighted: Sep-Factor separation <= 0.00 ft

Cimarex Parkway C State Com #1 (Offset) Plugged Oil Inc Only Off-10850ft (Def Survey)													Fail Major
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1760.44	32.81	1759.15	1727.63	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
1760.30	32.81	1759.00	1727.49	85258.53	MAS = 10.00 (m)	10.00	10.00					MinPt-O-SF	
1760.22	32.81	1758.92	1727.41	126296.32	MAS = 10.00 (m)	23.00	23.00					WRP	
1760.21	32.81	1758.86	1727.40	52343.93	MAS = 10.00 (m)	30.00	30.00					MinPts	
1574.13	425.64	1289.94	1148.49	5.56	OSF1.50	6480.00	6379.50					MinPt-CtCt	
1574.59	473.79	1258.31	1100.80	4.99	OSF1.50	7140.00	7035.96	OSF<5.00				Enter Alert	
603.42	605.72	198.70	-2.30	1.49	OSF1.50	9810.00	8948.42		OSF<1.50			Enter Minor	
403.47	606.24	-1.68	-202.77	1.00	OSF1.50	10010.00	8953.17			OSF<1.00		Enter Major	
5.87	607.15	-399.52	-601.29	0.01	OSF1.50	10410.00	8960.66					MinPts	
396.45	605.62	-7.73	-209.17	0.98	OSF1.50	10810.00	8968.16			OSF>1.00		Exit Major	
596.40	605.89	192.04	-9.49	1.48	OSF1.50	11010.00	8971.91					Exit Minor	
2016.14	607.87	1610.46	1406.26	4.98	OSF1.50	12430.00	8998.53	OSF>5.00				Exit Alert	
8489.93	615.02	8079.48	7874.90	20.75	OSF1.50	18908.36	9090.00					TD	

Cimarex State 14 Com #1 (Offset) Oil Inc Only Off-11556ft (Def Survey)													Fail Major
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5587.30	32.81	5586.02	5554.49	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
5587.15	32.81	5585.85	5554.34	271725.60	MAS = 10.00 (m)	23.00	23.00					WRP	
5587.03	32.81	5585.74	5554.23	82768.52	MAS = 10.00 (m)	50.00	50.00					MinPts	
5528.34	518.30	5182.42	5010.08	16.04	OSF1.50	6980.00	6875.97	OSF<5.00				MinPt-CtCt	
2258.79	683.22	1801.45	1575.57	4.99	OSF1.50	12110.00	8992.53					Enter Alert	
680.19	687.59	219.27	-7.41	1.48	OSF1.50	13690.00	9022.15		OSF<1.50			Enter Minor	
460.59	688.21	-0.84	-227.62	1.00	OSF1.50	13910.00	9026.06			OSF<1.00		Enter Major	
17.48	698.83	-450.26	-681.35	0.03	OSF1.50	14360.00	9032.19					MinPt-O-SF	
13.89	702.93	-455.24	-689.04	0.03	OSF1.50	14370.00	9032.32					MinPts	
448.17	682.83	-7.48	-234.66	0.98	OSF1.50	14820.00	9038.05			OSF>1.00		Exit Major	
677.75	683.10	221.92	-5.35	1.49	OSF1.50	15050.00	9040.97					Exit Minor	
2277.06	684.88	1820.05	1592.18	4.99	OSF1.50	16650.00	9061.30	OSF>5.00				Exit Alert	
4535.12	687.33	4076.47	3847.79	9.91	OSF1.50	18908.36	9090.00					TD	

Cimarex Parkway A State Com #1 (Offset) Plugged Gas Inc Only Off-11740ft (Def Survey)													Fail Major
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3959.49	32.81	3958.20	3926.68	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
3959.30	32.81	3957.99	3926.49	169213.83	MAS = 10.00 (m)	23.00	23.00					MinPt-O-SF	
3959.25	32.81	3957.83	3926.44	30734.13	MAS = 10.00 (m)	50.00	50.00					MinPts	
3877.52	434.64	3587.43	3442.98	13.42	OSF1.50	6560.00	6458.19	OSF<5.00				MinPt-CtCt	
1937.14	585.22	1545.69	1351.92	4.99	OSF1.50	10780.00	8967.60					Enter Alert	
587.67	588.62	193.40	-0.85	1.50	OSF1.50	12130.00	8992.91		OSF<1.50			Enter Minor	
387.92	589.16	-6.78	-201.24	0.98	OSF1.50	12330.00	8996.66			OSF<1.00		Enter Major	
22.33	596.19	-375.56	-573.86	0.05	OSF1.50	12720.00	9003.97					MinPts	
383.22	585.37	-7.46	-202.15	0.98	OSF1.50	13100.00	9011.09			OSF>1.00		Exit Major	
582.96	585.65	192.10	-2.68	1.49	OSF1.50	13300.00	9014.84					Exit Minor	
1950.70	587.19	1558.81	1363.51	4.99	OSF1.50	14670.00	9036.14	OSF>5.00				Exit Alert	
6186.92	591.01	5792.48	5595.90	15.73	OSF1.50	18908.36	9090.00					TD	

Owland DRILLING EXP Lower State #1 (Offset) Plugged Gas Inc Blind Off-2870ft (Def Survey)													Fail Major
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454.99	32.81	453.70	422.18	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
454.54	32.81	453.19	421.73	6734.06	MAS = 10.00 (m)	10.00	10.00					MinPt-O-SF	
454.28	32.81	452.97	421.47	18132.16	MAS = 10.00 (m)	23.00	23.00					WRP	
454.28	138.13	381.76	316.15	4.97	OSF1.50	510.00	510.00	OSF<5.00				Enter Alert	
454.28	455.64	150.09	-1.36	1.50	OSF1.50	1520.00	1520.00		OSF<1.50			Enter Minor	
446.70	672.46	-2.04	-225.76	1.00	OSF1.50	2210.00	2209.81			OSF<1.00		Enter Major	
322.39	885.91	-268.67	-563.62	0.54	OSF1.50	2930.00	2917.48					MinPts	
321.06	883.63	-268.46	-562.57	0.54	OSF1.50	2940.00	2927.23					MinPt-O-SF	
318.85	865.87	-258.85	-547.02	0.55	OSF1.50	2980.00	2966.24					MinPt-CtCt	
388.67	603.49	-14.08	-214.82	0.96	OSF1.50	3200.00	3180.77			OSF>1.00		Exit Major	
460.50	464.94	150.11	-4.44	1.49	OSF1.50	3310.00	3288.04					Exit Minor	
717.06	220.58	569.57	496.48	4.90	OSF1.50	3620.00	3590.33	OSF>5.00				Exit Alert	
2552.26	96.32	2487.62	2455.95	40.27	OSF1.50	5510.00	5433.36					MinPt-O-SF	
8632.79	630.66	8211.92	8002.13	20.57	OSF1.50	14800.00	9037.79					MinPt-O-SF	
11901.04	766.18	11389.83	11134.86	23.34	OSF1.50	18908.36	9090.00					TD	

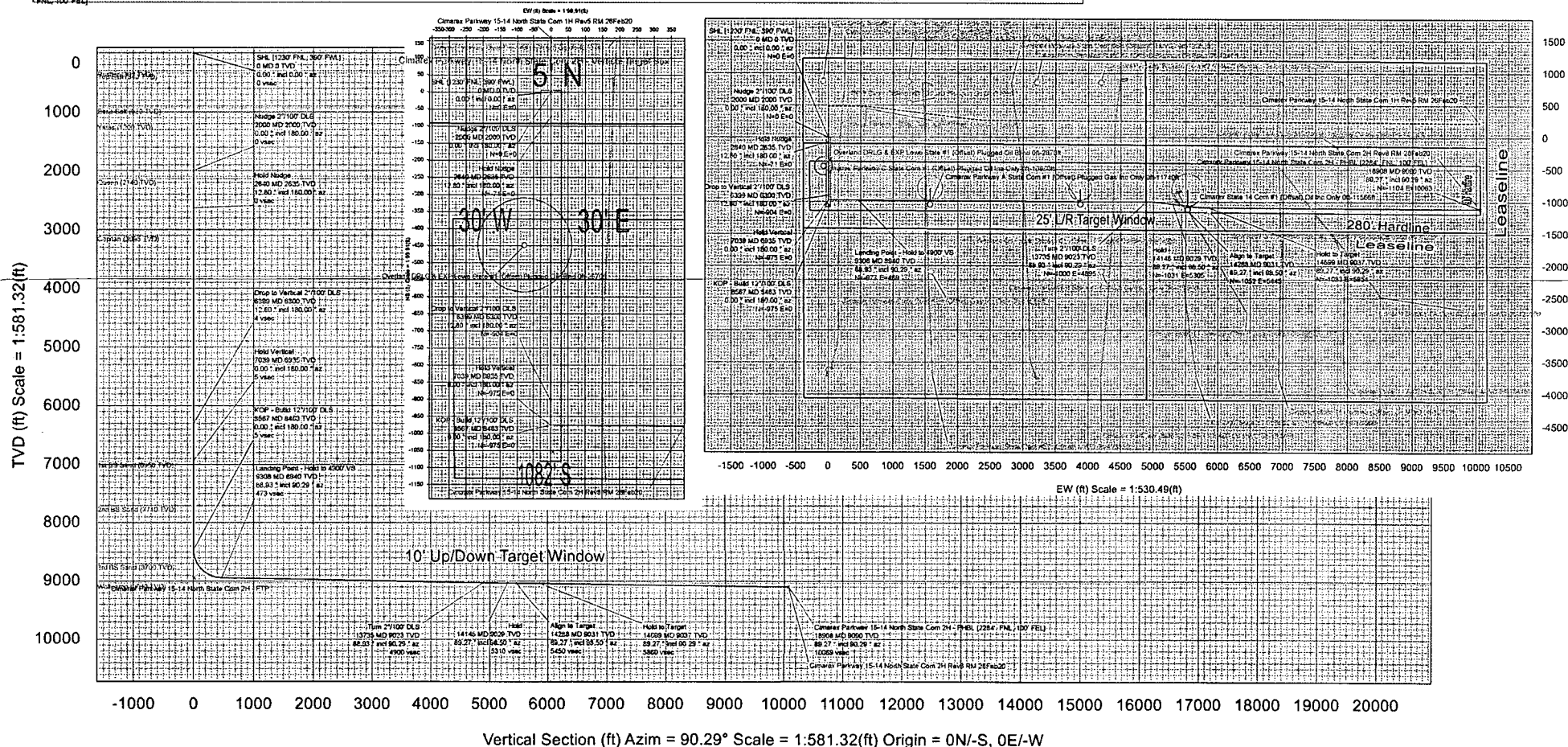
Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)		Minor	Major		
Cimarex Parkway 15-14 North State Com 1H Rev8 RM 28Feb20 (Def Plan)													
	19.99	16.25	18.71	3.74	N/A	MAS = 4.95 (m)	0.00	0.00	OSF<5.00	CtCt<=5m<15.00		Enter Alert	
	19.99	16.25	18.70	3.74	16838.01	MAS = 4.95 (m)	23.00	23.00				WRP	
	19.99	19.47	6.58	0.52	1.54	OSF1.50	1990.00	1990.00				MinPt-CtCt	
	19.99	19.56	6.52	0.43	1.54	OSF1.50	2000.00	2000.00				MINPT-O-EOU	
	20.03	19.61	6.53	0.42	1.53	OSF1.50	2010.00	2010.00				MinPts	
	62.27	20.19	48.38	42.08	4.84	OSF1.50	2350.00	2349.13				Exit Alert	
	1457.83	60.94	1416.77	1396.89	36.62	OSF1.50	9260.00	8938.68				MinPt-CtCt	
	1252.71	123.67	1189.83	1129.04	15.34	OSF1.50	11380.00	8978.85				MinPt-CtCt	
	1253.69	222.75	1104.74	1030.91	8.48	OSF1.50	13810.00	9024.36				MINPT-O-EOU	
	1255.02	224.44	1104.96	1030.58	8.43	OSF1.50	13850.00	9025.06				MinPt-O-ADP	
	1331.84	400.53	1064.39	931.31	5.00	OSF1.50	17990.00	9078.33	OSF<5.00		Enter Alert		
	1331.84	439.34	1038.51	892.50	4.56	OSF1.50	18890.00	9089.77			MinPt-CtCt		
	1331.88	439.85	1038.22	892.03	4.55	OSF1.50	18908.36	9090.00			MinPts		
Cimarex Parkway State Com #3H (Offset) Oil Off-12324ft (Def Survey)													
	3723.08	32.81	3721.79	3690.27	N/A	MAS = 10.00 (m)	0.00	0.00	OSF<5.00			Surface	
	3723.07	32.81	3721.73	3690.27	N/A	MAS = 10.00 (m)	10.00	10.00				MinPts	
	3723.09	32.81	3721.80	3690.28	471023.63	MAS = 10.00 (m)	23.00	23.00				WRP	
	3681.65	32.81	3671.47	3648.85	414.25	MAS = 10.00 (m)	2000.00	2000.00				MinPt-O-SF	
	3676.98	32.81	3666.80	3644.17	414.03	MAS = 10.00 (m)	2100.00	2099.98				MinPt-O-SF	
	3455.38	32.81	3448.81	3422.57	676.03	MAS = 10.00 (m)	3210.00	3190.52				MinPt-O-SF	
	288.40	90.62	227.56	197.79	4.82	OSF1.50	7800.00	7695.96				Enter Alert	
	154.44	142.35	59.11	12.09	1.63	OSF1.50	8040.00	7935.96				MinPts	
	290.78	91.54	229.32	199.24	4.81	OSF1.50	8290.00	8185.96		OSF>5.00		Exit Alert	
	1285.57	99.63	1218.73	1185.94	19.55	OSF1.50	9790.00	8949.04				MinPt-O-SF	
	9967.57	128.45	9881.50	9839.12	117.56	OSF1.50	18908.36	9090.00			TD		
Cimarex State 14' Com #2 (Offset) Gas Shut In Off-12042.74FT (Def Survey)													
	5506.65	32.81	5506.36	5473.84	N/A	MAS = 10.00 (m)	0.00	0.00	OSF<5.00			Surface	
	5506.56	32.81	5505.27	5473.76	614352.77	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	5506.56	32.81	5505.27	5473.75	702919.26	MAS = 10.00 (m)	23.00	23.00				WRP	
	5503.35	32.81	5497.18	5470.54	1127.91	MAS = 10.00 (m)	1060.00	1060.00				MinPts	
	5503.44	32.81	5497.10	5470.63	1087.46	MAS = 10.00 (m)	1110.00	1110.00				MINPT-O-EOU	
	5494.32	32.81	5483.52	5461.52	577.68	MAS = 10.00 (m)	2100.00	2099.98				MinPt-O-SF	
	5463.19	32.81	5453.38	5430.36	642.54	MAS = 10.00 (m)	2960.00	2946.74				MinPt-O-SF	
	5447.82	32.81	5438.86	5415.01	709.40	MAS = 10.00 (m)	3770.00	3736.61				MinPts	
	5447.82	32.81	5438.86	5415.01	709.31	MAS = 10.00 (m)	3780.00	3746.36				MinPts	
	5360.42	32.81	5340.00	5327.61	280.40	MAS = 10.00 (m)	6080.00	5989.20				MinPts	
	5360.52	32.81	5339.89	5327.71	277.17	MAS = 10.00 (m)	6130.00	6037.95	OSF<5.00			MINPT-O-EOU	
	5363.63	32.81	5342.01	5330.82	263.67	MAS = 10.00 (m)	6400.00	6301.24				MinPt-O-SF	
	5360.35	32.81	5338.92	5327.54	266.24	MAS = 10.00 (m)	6710.00	6606.68				MINPT-O-EOU	
	5360.33	32.81	5338.95	5327.52	266.80	MAS = 10.00 (m)	6730.00	6626.56				MinPts	
	482.28	148.82	381.83	333.45	4.95	OSF1.50	14350.00	9032.07				Enter Alert	
	416.98	176.80	298.67	240.17	3.55	OSF1.50	14590.00	9035.12				MinPt-CtCt	
	417.18	177.36	298.52	239.82	3.54	OSF1.50	14600.00	9035.25				MINPT-O-EOU	
	417.65	177.84	298.67	239.82	3.54	OSF1.50	14610.00	9035.38				MinPt-O-ADP	
	418.38	178.23	299.13	240.15	3.54	OSF1.50	14620.00	9035.51				MinPt-O-SF	
	534.90	163.19	425.68	371.71	4.94	OSF1.50	14920.00	9039.32		OSF>5.00		Exit Alert	
	4218.48	116.44	4140.42	4102.04	54.93	OSF1.50	18908.36	9090.00			TD		
Cimarex Parkway State Com #2H (Offset) Gas Off-11630ft (Def Survey)													
	617.81	32.81	616.53	585.01	N/A	MAS = 10.00 (m)	0.00	0.00	OSF<5.00			Surface	
	617.47	32.81	616.13	584.66	11682.47	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	617.26	32.81	615.94	584.45	23929.09	MAS = 10.00 (m)	23.00	23.00				WRP	
	617.25	32.81	615.85	584.44	5476.95	MAS = 10.00 (m)	30.00	30.00				MinPts	
	640.54	153.71	537.63	486.83	6.29	OSF1.50	2230.00	2229.75				MINPT-O-EOU	
	646.71	161.18	538.82	485.52	6.05	OSF1.50	2350.00	2349.13				MinPt-O-ADP	
	1062.25	318.55	849.45	743.70	5.02	OSF1.50	4950.00	4887.28				MinPt-O-SF	
	1143.16	343.92	913.46	799.24	5.00	OSF1.50	5340.00	5267.59				Enter Alert	
	1321.87	410.30	1047.91	911.57	4.84	OSF1.50	6140.00	6047.70				MinPt-O-SF	
	1447.93	458.70	1141.70	989.23	4.74	OSF1.50	6890.00	6786.03				MinPt-O-ADP	
	1398.59	616.98	976.80	771.57	3.38	OSF1.50	9410.00	8941.92	OSF>5.00			MinPts	
	1388.58	617.01	976.81	771.57	3.38	OSF1.50	9420.00	8942.11				MinPts	
	2056.81	619.83	1643.17	1436.99	4.98	OSF1.50	10590.00	8970.41				Exit Alert	
	9603.27	628.63	9183.76	8974.65	22.96	OSF1.50	18908.36	9090.00				TD	
Cimarex State 14' A Com #2 (Offset) MWD Off-12160ft (Def Survey)													
	6998.14	32.81	6996.85	6965.33	775998.32	MAS = 10.00 (m)	0.00	0.00	OSF<5.00			Surface	
	6998.06	32.81	6996.66	6965.25	62208.08	MAS = 10.00 (m)	23.00	23.00				WRP	
	6995.97	32.81	6993.05	6963.15	4298.38	MAS = 10.00 (m)	410.00	410.00				MinPts	
	6997.27	32.81	6991.31	6964.46	1495.49	MAS = 10.00 (m)	1020.00	1020.00				MINPT-O-EOU	
	7002.97	32.81	6993.06	6970.16	811.69	MAS = 10.00 (m)	2000.00	2000.00				MinPt-O-SF	
	6996.40	32.81	6990.10	6953.59	1396.22	MAS = 10.00 (m)	3270.00	3249.03				MinPt-O-SF	
	6985.52	32.81	6979.34	6952.71	1430.25	MAS = 10.00 (m)	3400.00	3375.80				MinPts	
	7479.33	39.54	7452.55	7439.73	293.22	OSF1.50	7110.00	7005.96				MinPts	
	7559.66	41.08	7531.85	7518.58	284.88	OSF1.50	7610.00	7505.96				MinPt-O-SF	
	7600.80	43.91	7571.10	7556.85	267.41	OSF1.50	7840.00	7735.96				MinPts	
	7611.76	44.08	7581.94	7567.69	266.75	OSF1.50	7910.00	7805.96	OSF<5.00			MinPt-O-SF	
	7744.79	48.07	7712.31	7696.72	248.25	OSF1.50	8610.00	8505.90				MinPts	
	731.94	223.64	581.78	508.30	4.96	OSF1.50	16570.00	9060.29				Enter Alert	
	688.81	250.91	521.10	437.90	4.13	OSF1.50	16820.00	9063.46				MinPt-CtCt	
	689.33	252.81	520.36	436.51	4.10	OSF1.50	16850.00	9063.84				MINPT-O-EOU	
	689.78	253.36	520.45	436.42	4.10	OSF1.50	16860.00	9063.97				MinPt-O-ADP	
	691.97	254.71	521.73	437.26	4.09	OSF1.50	16890.00	9064.35				MinPt-O-SF	
	806.02	244.25	642.76	561.77	4.97	OSF1.50	17250.00	9068.93		OSF>5.00			Exit Alert
	2154.73	155.84	2050.41	1998.89	20.90	OSF1.50	18908.36	9090.00					TD
EOG Dicky Sullivan #1 (Offset) Plugged Off Blind Off-2220ft (Def Survey)													
	876.19	32.81	874.90	843.38	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
												Warning Alert	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
Cimarex State 14'A Com #1 (Offset) Plugged Oil Inc Only Off 11725ft (Def Survey)	876.03	32.81	874.07	843.22	1284.55	MAS = 10.00 (m)	23.00	23.00	OSF<5.00			WRP	
	876.03	266.70	697.80	609.33	4.94	OSF1.50	910.00	910.00					Enter Alert
	876.03	609.36	469.36	266.67	2.16	OSF1.50	2000.00	2000.00					MinPt-CtCt
	886.04	683.66	429.84	202.39	1.94	OSF1.50	2240.00	2238.72					MinPts
	1585.48	480.17	1264.94	1105.32	4.96	OSF1.50	3390.00	3366.05	OSF>5.00			Exit Alert	
	9563.49	491.46	9256.42	9092.02	29.32	OSF1.50	15220.00	9043.13					MinPt-O-SF
	12400.64	582.52	12011.66	11818.12	32.00	OSF1.50	18908.36	9090.00					TD
Cimarex State 14'A Com #1 (Offset) Plugged Oil Inc Only Off 11725ft (Def Survey)													Warning Alert
Cimarex Parkway B State #1 (Offset) Gas Inc Only Off 10590ft (Def Survey)	7852.82	32.81	7851.54	7820.01	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	7852.81	32.81	7851.53	7820.01	N/A	MAS = 10.00 (m)	10.00	10.00					MinPts
	7852.82	32.81	7851.35	7820.01	43801.45	MAS = 10.00 (m)	23.00	23.00					WRP
	7850.10	66.52	7805.33	7783.58	180.49	OSF1.50	1360.00	1360.00					MinPt-CtCt
	7848.92	165.38	7738.24	7683.54	71.74	OSF1.50	3300.00	3278.29				MinPt-CtCt	
	7854.05	235.83	7696.40	7618.22	50.22	OSF1.50	4620.00	4565.48					MinPt-CtCt
	7860.31	266.21	7682.41	7594.10	44.50	OSF1.50	5350.00	5277.34					MINPT-O-EQU
	7865.05	271.94	7683.33	7593.11	43.58	OSF1.50	5540.00	5462.62					MinPt-O-ADP
	7866.45	354.76	7629.52	7511.70	33.38	OSF1.50	6940.00	6835.98	OSF<5.00			MinPt-CtCt	
	1601.36	486.11	1274.86	1115.25	4.99	OSF1.50	15380.00	9045.16					Enter Alert
	942.44	522.63	593.55	419.81	2.71	OSF1.50	16680.00	9061.68					MinPts
	942.54	522.70	593.64	419.84	2.71	OSF1.50	16690.00	9061.81					MinPt-O-SF
	1632.81	490.98	1305.06	1141.83	5.00	OSF1.50	18010.00	9078.58	OSF>5.00			Exit Alert	
	2421.85	481.55	2100.39	1940.31	7.56	OSF1.50	18908.36	9090.00					TD
Cimarex Parkway B State #1 (Offset) Gas Inc Only Off 10590ft (Def Survey)													Warning Alert
Cimarex Parkway State Com #1H (Offset) Gas Inc Only Off 11558ft (Def Survey)	4712.35	32.81	4711.07	4679.54	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4712.11	32.81	4710.79	4679.30	127005.07	MAS = 10.00 (m)	23.00	23.00					MinPt-O-SF
	4711.95	32.81	4710.58	4679.14	57293.45	MAS = 10.00 (m)	60.00	60.00					MinPts
	4370.91	338.41	4144.78	4032.50	19.46	OSF1.50	6780.00	6676.31					MinPt-CtCt
	1546.14	469.41	1231.51	1076.73	4.98	OSF1.50	11960.00	8989.72	OSF<5.00			Enter Alert	
	1093.66	482.89	770.89	610.77	3.41	OSF1.50	13050.00	9010.16					MinPt-CtCt
	1093.67	482.97	770.87	610.70	3.41	OSF1.50	13060.00	9010.34					MinPts
	1093.96	483.12	771.09	610.84	3.41	OSF1.50	13080.00	9010.72					MinPt-O-SF
	1595.14	481.01	1274.04	1114.13	4.98	OSF1.50	14260.00	9030.92	OSF>5.00			Exit Alert	
	5935.28	474.44	5618.55	5460.84	18.81	OSF1.50	18908.36	9090.00					TD
Cimarex Parkway State Com #1H (Offset) Gas Inc Only Off 11558ft (Def Survey)													Warning Alert
Western Oil Fields D Sub Area State #2 (Offset) Plugged Oil Blind Off-1577ft (Def Survey)	2623.79	32.81	2622.50	2590.98	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2623.49	32.81	2622.16	2590.68	67349.24	MAS = 10.00 (m)	23.00	23.00					MinPt-O-SF
	2623.39	32.81	2622.01	2590.58	27222.19	MAS = 10.00 (m)	50.00	50.00					MinPts
	1941.48	352.71	1705.69	1588.77	8.29	OSF1.50	6970.00	6865.97					MinPt-CtCt
	1936.70	407.39	1664.45	1529.30	7.16	OSF1.50	8010.00	7905.96	OSF<5.00			MinPt-CtCt	
	1532.85	462.34	1223.71	1070.51	4.99	OSF1.50	9380.00	8941.36					Enter Alert
	1115.18	464.52	804.65	650.66	3.61	OSF1.50	10430.00	8961.04					MinPts
	1115.21	464.54	804.71	650.67	3.61	OSF1.50	10440.00	8961.23					MinPt-O-SF
	1544.32	465.69	1233.43	1078.63	4.98	OSF1.50	11500.00	8981.10	OSF>5.00			Exit Alert	
	8535.46	463.38	8226.11	8072.08	27.70	OSF1.50	18908.36	9090.00					TD
Western Oil Fields D Sub Area State #2 (Offset) Plugged Oil Blind Off-1577ft (Def Survey)													Warning Alert
Anadarko Samwell State #1 (Offset) Plugged Oil Blind Off 4245ft (Def Survey)	1512.70	32.81	1511.42	1479.89	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1512.63	32.81	1510.46	1479.82	1697.18	MAS = 10.00 (m)	23.00	23.00					WRP
	1512.63	455.95	1208.24	1056.68	4.99	OSF1.50	1510.00	1510.00					Enter Alert
	1512.63	481.10	1191.47	1031.53	4.72	OSF1.50	1590.00	1590.00					MinPt-CtCt
	1512.66	481.57	1191.18	1031.05	4.72	OSF1.50	1600.00	1600.00	OSF>5.00			MinPts	
	1556.87	467.99	1244.45	1088.88	5.00	OSF1.50	1960.00	1960.00					Exit Alert
	7588.41	121.78	7507.73	7467.63	94.46	OSF1.50	9930.00	8951.67					MinPts
	10449.98	360.72	10209.07	10089.26	43.63	OSF1.50	17120.00	9067.27					MinPt-O-SF
	11744.38	396.39	11479.69	11347.99	44.58	OSF1.50	18908.36	9090.00				TD	
Anadarko Samwell State #1 (Offset) Plugged Oil Blind Off 4245ft (Def Survey)													Warning Alert
Cimarex Parkway State Com #5Y (Offset) MWD Off-12388ft (Def Survey)	3322.94	32.81	3321.66	3290.13	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3322.90	32.81	3320.83	3290.10	4227.37	MAS = 10.00 (m)	23.00	23.00					WRP
	3322.90	609.67	2916.03	2713.23	8.19	OSF1.50	2000.00	2000.00					MinPt-CtCt
	3386.73	1017.45	2708.00	2369.28	5.00	OSF1.50	3320.00	3297.79					Enter Alert
	3462.68	1320.04	2582.22	2142.64	3.94	OSF1.50	4310.00	4263.19	OSF>5.00			MinPts	
	3988.08	1198.97	3188.34	2789.11	4.99	OSF1.50	6020.00	5930.69					Exit Alert
	5078.65	488.45	4752.58	4590.20	15.63	OSF1.50	11830.00	8967.29					MinPt-O-ADP
	5077.44	487.06	4752.31	4590.38	15.67	OSF1.50	11900.00	8968.60					MINPT-O-EQU
	5077.16	486.42	4752.45	4590.74	15.69	OSF1.50	11950.00	8968.53				MinPt-CtCt	
	6719.18	932.92	6096.80	5786.25	10.82	OSF1.50	16340.00	9057.36					MinPt-O-SF
	8608.68	1100.56	7874.55	7508.12	11.75	OSF1.50	18908.36	9090.00					TD
Cimarex Parkway State Com #5Y (Offset) MWD Off-12388ft (Def Survey)													Pass
Cimarex Parkway State Com #5Y (Offset) MWD Off-12388ft (Def Survey)	1786.35	32.81	1785.07	1753.54	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1786.35	32.81	1785.07	1753.54	N/A	MAS = 10.00 (m)	10.00	10.00					MinPts
	1786.35	32.81	1785.05	1753.55	114258.31	MAS = 10.00 (m)	23.00	23.00					WRP
	1786.45	32.81	1784.97	1753.64	9681.41	MAS = 10.00 (m)	80.00	80.00					MINPT-O-EQU
	1787.22	32.81	1784.02	1754.41	933.90	MAS = 10.00 (m)	420.00	420.00				MinPts	
	1787.67	32.81	1783.85	1754.86	704.49	MAS = 10.00 (m)	610.00	610.00					MINPT-O-EQU
	1791.65	32.81	1781.59	1758.84	203.98	MAS = 10.00 (m)	2060.00	2060.00					MinPts
	1791.65	32.81	1781.58	1758.85	203.83	MAS = 10.00 (m)	2070.00	2069.99					MINPT-O-EQU
	1791.74	32.81	1781.64	1758.93	203.20	MAS = 10.00 (m)	2100.00	2069.98				MinPt-O-SF	
	1518.54	95.23	1454.58	1423.31	24.26	OSF1.50	8050.00	7945.96					MinPt-O-SF
	1518.42	95.21	1454.47	1423.21	24.26	OSF1.50	8070.00	7965.96					MinPts
	1156.09	65.70	1111.86	1090.39	26.88	OSF1.50	9750.00	8948.29				MinPt-O-SF	
	994.43	56.15	956.63	938.34	27.15	OSF1.50	10340.00	8959.35					MinPt-CtCt
	994.54	56.27	956.60	938.27	27.10	OSF1.50	10350.00	8959.54				MinPts	
1171.79	75.21	1121.22	1096.58	23.75	OSF1.50	10960.00	8970.98	MinPt-O-SF					
8610.33	118.74	8530.74	8491.58	109.95	OSF1.50	18908.36	9090.00	TD					

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Alert	Risk Level			Alert	Status
	Cl-Cl (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)		Minor	Major			
Cimarex State 14 Com #3 (Offset) Oil MWD Off-12512ft (Def Survey)														
7046.06	32.81	7044.58	7013.27	33011.55		MAS = 10.00 (m)	0.00	0.00					Surface	Pass
7045.78	32.81	7044.24	7012.97	27258.49		MAS = 10.00 (m)	23.00	23.00					WRP	
7041.23	32.81	7034.83	7008.45	1370.34		MAS = 10.00 (m)	1120.00	1120.00					MinPts	
7041.53	32.81	7034.57	7008.72	1241.01		MAS = 10.00 (m)	1250.00	1250.00					MINPT-O-EQU	
7042.28	32.81	7034.50	7009.47	1083.58		MAS = 10.00 (m)	1400.00	1400.00					MINPT-O-EQU	
7049.43	32.81	7038.91	7016.62	763.24		MAS = 10.00 (m)	2100.00	2099.98					MinPt-O-SF	
7073.22	32.81	7066.09	7040.41	1210.07		MAS = 10.00 (m)	3130.00	3112.51					MinPt-O-SF	
7076.80	32.81	7069.70	7043.96	1217.65		MAS = 10.00 (m)	3250.00	3228.53					MinPt-O-SF	
7155.41	32.81	7141.76	7122.60	578.23		MAS = 10.00 (m)	5360.00	5287.09					MinPt-O-SF	
6950.76	78.50	6897.96	6872.26	135.20		OSF1.50	8130.00	8025.96					MinPts	
6950.90	78.50	6898.10	6872.35	135.19		OSF1.50	8170.00	8065.96					MinPt-O-SF	
1012.35	161.06	904.54	851.28	9.49		OSF1.50	15790.00	9050.37					MinPt-CICI	
1012.36	161.22	904.45	851.13	9.48		OSF1.50	15800.00	9050.50					MINPT-O-EQU	
1012.47	161.38	904.46	851.05	9.47		OSF1.50	15810.00	9050.63					MinPt-O-ADP	
1014.50	161.99	906.08	852.51	9.46		OSF1.50	15860.00	9051.26					MinPt-O-SF	
3274.56	121.40	3193.19	3153.15	40.88		OSF1.50	18908.36	9090.00					TD	
Cimarex State 14 Com #2 ST01 (Offset) Oil Off-10644ft (Def Survey)														
5506.65	32.81	5505.36	5473.84	N/A		MAS = 10.00 (m)	0.00	0.00					Surface	Pass
5506.56	32.81	5505.27	5473.75	614352.77		MAS = 10.00 (m)	20.00	20.00					MinPt-O-SF	
5506.56	32.81	5505.27	5473.75	702919.26		MAS = 10.00 (m)	23.00	23.00					WRP	
5486.98	32.81	5474.75	5454.17	501.78		MAS = 10.00 (m)	2100.00	2099.98					MinPt-O-SF	
5482.92	32.81	5451.03	5430.11	516.26		MAS = 10.00 (m)	2750.00	2741.96					MinPt-O-SF	
5452.27	32.81	5440.52	5419.46	521.85		MAS = 10.00 (m)	3040.00	3024.75					MinPt-O-SF	
5445.28	32.81	5435.12	5412.47	613.21		MAS = 10.00 (m)	3680.00	3648.84					MINPT-O-EQU	
5445.19	32.81	5435.18	5412.38	623.75		MAS = 10.00 (m)	3770.00	3736.61					MinPts	
5325.43	36.98	5300.31	5288.45	224.33		OSF1.50	6630.00	6527.35					MinPt-O-SF	
5322.76	36.68	5297.87	5286.08	225.66		OSF1.50	6910.00	6806.01					MinPt-O-ADP	
5322.75	36.67	5297.87	5286.08	225.73		OSF1.50	6920.00	6816.00					MINPT-O-EQU	
5322.74	36.65	5297.87	5286.09	225.82		OSF1.50	6930.00	6825.99					MinPt-CICI	
5323.23	36.27	5298.62	5286.96	228.20		OSF1.50	7100.00	6995.96					MinPt-O-ADP	
5323.21	36.25	5298.62	5286.96	228.35		OSF1.50	7110.00	7005.96					MINPT-O-EQU	
5323.16	36.13	5298.65	5287.04	229.14		OSF1.50	7160.00	7055.96					MinPt-CICI	
1020.57	129.06	934.10	891.50	11.97		OSF1.50	14290.00	9031.30					MinPt-CICI	
1020.57	129.19	934.02	891.38	11.95		OSF1.50	14300.00	9031.43					MinPts	
1022.18	129.64	935.33	892.54	11.93		OSF1.50	14350.00	9032.07					MinPt-O-SF	
4750.12	65.26	4706.19	4684.86	111.35		OSF1.50	18908.36	9090.00					TD	
Cimarex Parkway State Com #4H (Offset) Oil MWD Off-12552ft (Def Survey)														
4953.91	32.81	4952.63	4921.11	N/A		MAS = 10.00 (m)	0.00	0.00					Surface	Pass
4953.81	32.81	4952.51	4921.00	376659.93		MAS = 10.00 (m)	20.00	20.00					MinPt-O-SF	
4953.80	32.81	4952.50	4920.99	400313.44		MAS = 10.00 (m)	23.00	23.00					WRP	
4953.78	32.81	4952.48	4920.97	131035.64		MAS = 10.00 (m)	40.00	40.00					MinPts	
4953.80	32.81	4952.44	4920.99	59894.80		MAS = 10.00 (m)	60.00	60.00					MINPT-O-EQU	
4956.81	32.81	4953.23	4924.00	2218.21		MAS = 10.00 (m)	480.00	480.00					MINPT-O-EQU	
4954.22	32.81	4956.50	4931.41	770.89		MAS = 10.00 (m)	1370.00	1370.00					MinPts	
4954.29	32.81	4956.45	4931.48	756.59		MAS = 10.00 (m)	1400.00	1400.00					MINPT-O-EQU	
4954.66	32.81	4956.61	4931.85	733.82		MAS = 10.00 (m)	1450.00	1450.00					MinPt-O-SF	
4947.91	32.81	4937.95	4915.10	570.65		MAS = 10.00 (m)	2000.00	2000.00					MinPt-O-SF	
4813.94	32.81	4806.55	4781.13	800.78		MAS = 10.00 (m)	3030.00	3015.00					MinPt-O-SF	
4511.59	144.77	4414.42	4366.82	47.37		OSF1.50	4600.00	4545.98					MinPt-O-SF	
4066.23	149.34	3966.01	3916.85	41.37		OSF1.50	5260.00	5189.57					MinPt-O-SF	
4028.03	145.51	3930.37	3882.53	42.06		OSF1.50	5320.00	5248.08					MinPts	
3003.66	158.15	2897.57	2845.51	28.83		OSF1.50	8050.00	7945.96					MinPt-O-SF	
3003.64	158.15	2897.55	2845.50	28.83		OSF1.50	8060.00	7955.96					MinPts	
1149.93	103.76	1080.09	1046.17	16.92		OSF1.50	11320.00	8977.72					MinPt-O-SF	
1030.63	93.19	967.91	937.51	16.92		OSF1.50	11830.00	8987.29					MinPt-CICI	
1030.73	93.25	967.83	937.44	16.90		OSF1.50	11840.00	8987.47					MinPts	
1149.01	109.80	1075.15	1039.21	15.93		OSF1.50	12340.00	8996.85					MinPt-O-SF	
7123.00	129.74	7035.85	6993.26	83.61		OSF1.50	18908.36	9090.00					TD	
Cimarex Parkway State Com #5H (Offset) Oil MWD Off-12475ft (Def Survey)														
4603.33	32.81	4602.05	4570.52	N/A		MAS = 10.00 (m)	0.00	0.00					Surface	Pass
4603.33	32.81	4602.05	4570.52	N/A		MAS = 10.00 (m)	10.00	10.00					MinPts	
4603.33	32.81	4602.04	4570.52	680457.63		MAS = 10.00 (m)	23.00	23.00					WRP	
4603.37	32.81	4602.01	4570.57	60358.72		MAS = 10.00 (m)	50.00	50.00					MINPT-O-EQU	
4658.39	32.81	4650.48	4625.58	702.23		MAS = 10.00 (m)	1480.00	1480.00					MinPt-O-SF	
4681.57	32.81	4671.45	4648.76	529.71		MAS = 10.00 (m)	2100.00	2099.98					MinPt-O-SF	
4722.77	32.81	4716.60	4689.95	965.97		MAS = 10.00 (m)	3220.00	3200.27					MinPt-O-SF	
4847.12	32.81	4830.43	4814.31	314.51		MAS = 10.00 (m)	5950.00	5862.43					MinPts	
4382.34	103.76	4312.66	4278.58	64.25		OSF1.50	8010.00	7905.96					MinPt-O-SF	
4381.69	103.72	4312.03	4277.97	64.30		OSF1.50	8080.00	7975.96					MinPts	
4381.68	103.71	4312.03	4277.98	64.31		OSF1.50	8090.00	7965.96					MinPt-CICI	
1031.27	108.71	958.37	922.56	14.38		OSF1.50	13200.00	9012.97					MinPt-CICI	
1031.29	108.85	958.23	922.44	14.36		OSF1.50	13210.00	9013.16					MINPT-O-EQU	
1031.41	109.00	958.32	922.41	14.35		OSF1.50	13220.00	9013.34					MinPt-O-ADP	
1037.90	110.34	963.91	927.56	14.25		OSF1.50	13320.00	9015.22					MinPt-O-SF	
5788.98	105.01	5718.55	5683.98	83.70		OSF1.50	18908.36	9090.00					TD	
Cimarex State 14 Com #2 ST01 (Offset) MWD Off-10415ft (Def Survey)														
6996.16	32.81	6996.87	6965.35	N/A		MAS = 10.00 (m)	0.00	0.00					Surface	Pass
6996.13	32.81	6996.78	6965.32	116994.12		MAS = 10.00 (m)	23.00	23.00					WRP	
6996.17	32.81	6993.15	6963.35	4105.75		MAS = 10.00 (m)	440.00	440.00					MinPts	
6996.80	32.81	6992.58	6963.99	2388.40		MAS = 10.00 (m)	720.00	720.00					MINPT-O-EQU	
6997.52	32.81	6992.14	6964.71	1708.82		MAS = 10.00 (m)	980.00	980.00					MINPT-O-EQU	
7003.42	32.81	6993.45	6970.61	806.77		MAS = 10.00 (m)	2000.00	2000.00					MinPt-O-SF	
7002.77	32.81	6992.80	6969.95	805.92		MAS = 10.00 (m)	2100.00	2099.98					MinPt-O-SF	
6997.77	32.81	6982.00	6954.96	1557.88		MAS = 10.00 (m)	3390.00	3366.05					MinPts	
7745.36	48.13	7712.85	7697.23	247.96		OSF1.50	8600.00	8495.94					MinPts	
1153.43	199.26	1020.16												

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Alert	Risk Level		Alert	Status	
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)		Minor	Major			
	1154.10	200.53	1019.98	953.57	8.68	OSF1.50	16710.00	9062.06				MinPt-O-ADP		
	1160.57	202.67	1025.03	957.90	8.63	OSF1.50	16800.00	9063.21				MinPt-O-SF		
	2498.80	149.48	2398.72	2349.32	25.28	OSF1.50	18908.36	9090.00				TD		
EOG Dicky Sullivan #3 (Offset) Plugged Off Off-2405R (Def Survey)														Pass
	1350.56	32.81	1349.28	1317.76	N/A	MAS = 10.00 (m)	0.00	0.00				Surface		
	1350.46	32.81	1349.11	1317.66	19698.39	MAS = 10.00 (m)	20.00	20.00				MinPts		
	1350.46	32.81	1349.05	1317.66	10606.63	MAS = 10.00 (m)	23.00	23.00				WRP		
	1346.15	58.88	1306.47	1287.27	35.03	OSF1.50	1220.00	1220.00				MinPt-CtCt		
	1366.63	113.45	1290.57	1253.18	18.26	OSF1.50	2270.00	2269.60				MINPT-O-EQU		
	1372.09	120.57	1291.28	1251.52	17.24	OSF1.50	2400.00	2398.70				MinPt-O-ADP		
	1373.13	120.97	1292.06	1252.16	17.19	OSF1.50	2420.00	2418.50				MinPt-O-SF		
	6705.42	41.24	6677.48	6664.16	251.71	OSF1.50	9960.00	8952.23				MinPt-CtCt		
	6705.58	41.82	6677.27	6663.76	248.10	OSF1.50	10010.00	8953.17				MINPT-O-EQU		
	6705.87	42.19	6677.32	6663.68	245.86	OSF1.50	10040.00	8953.73				MinPt-O-ADP		
	8999.80	139.78	8906.19	8860.02	97.42	OSF1.50	15900.00	9052.53				MinPt-O-SF		
	11171.85	161.67	11063.64	11010.17	104.47	OSF1.50	18908.36	9090.00				TD		
Western Oil Fields State A #1 (Offset) Plugged Off Blind Off-2625R (Def Survey)														Pass
	4269.71	32.81	4268.42	4236.90	N/A	MAS = 10.00 (m)	0.00	0.00				Surface		
	4269.51	32.81	4268.20	4236.70	157418.10	MAS = 10.00 (m)	23.00	23.00				MinPt-O-SF		
	4224.01	810.13	3683.48	3413.88	7.83	OSF1.50	2870.00	2858.97				MinPt-O-SF		
	4220.26	808.68	3680.70	3411.53	7.84	OSF1.50	3000.00	2985.74				MinPt-O-ADP		
	4220.04	808.39	3680.68	3411.65	7.84	OSF1.50	3020.00	3005.25				MINPT-O-EQU		
	4219.88	807.76	3680.94	3412.12	7.85	OSF1.50	3060.00	3044.25				MinPt-CtCt		
	6378.13	136.24	6286.87	6241.89	70.88	OSF1.50	12600.00	9001.72				MinPts		
	6378.13	136.24	6286.87	6241.89	70.88	OSF1.50	12610.00	9001.91				MinPt-CtCt		
	8888.62	583.78	8499.01	8304.84	22.83	OSF1.50	18840.00	9089.13				MinPt-O-SF		
	8936.38	586.87	8544.71	8349.51	22.89	OSF1.50	18908.36	9090.00				TD		
Cimarex Parkway B State Com. #2 (Offset) Plugged Off Inc Only Off-2450R (Def Survey)														Pass
	4286.96	32.81	4285.67	4254.15	N/A	MAS = 10.00 (m)	0.00	0.00				Surface		
	4286.91	32.81	4285.62	4254.10	641930.82	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF		
	4286.89	32.81	4285.60	4254.08	N/A	MAS = 10.00 (m)	20.00	20.00				MINPT-O-EQU		
	4286.88	32.81	4285.60	4254.08	N/A	MAS = 10.00 (m)	23.00	23.00				MinPts		
	4278.22	95.37	4214.21	4182.85	68.19	OSF1.50	1840.00	1840.00				MinPt-CtCt		
	4283.98	116.85	4205.66	4167.14	55.59	OSF1.50	2300.00	2299.45				MINPT-O-EQU		
	4290.01	124.05	4206.88	4165.93	52.40	OSF1.50	2460.00	2458.03				MinPt-O-ADP		
	4293.89	127.27	4208.62	4166.63	51.11	OSF1.50	2540.00	2536.81				MinPt-O-SF		
	7885.37	72.46	7636.63	7612.91	161.93	OSF1.50	9307.70	8940.00				MinPt-O-SF		
	6791.58	99.39	6724.90	6692.20	103.83	OSF1.50	12900.00	9007.34				MinPt-CtCt		
	6792.11	101.13	6724.27	6690.99	102.02	OSF1.50	12990.00	9009.03				MINPT-O-EQU		
	6792.92	102.10	6724.43	6690.82	101.05	OSF1.50	13040.00	9009.97				MinPt-O-ADP		
	8041.49	171.33	7926.84	7870.16	70.92	OSF1.50	17210.00	9068.42				MinPt-O-SF		
	9056.76	186.56	8931.96	8870.20	73.31	OSF1.50	18908.36	9090.00				TD		
Stout Kelly G Dunnigan State #2 (Offset) Plugged Off Blind Off-2332R (Def Survey)														Pass
	5970.16	32.81	5968.87	5937.35	N/A	MAS = 10.00 (m)	0.00	0.00				Surface		
	5970.02	32.81	5968.71	5937.21	320377.17	MAS = 10.00 (m)	23.00	23.00				WRP		
	5963.40	718.76	5483.80	5244.65	12.46	OSF1.50	2470.00	2467.89				MinPt-O-SF		
	5962.32	718.43	5482.94	5243.83	12.47	OSF1.50	2580.00	2576.05				MinPt-O-ADP		
	5962.29	718.39	5482.93	5243.89	12.47	OSF1.50	2590.00	2585.84				MINPT-O-EQU		
	5962.24	718.26	5482.97	5243.98	12.47	OSF1.50	2620.00	2615.17				MinPt-CtCt		
	6556.75	130.86	6569.12	6525.93	77.05	OSF1.50	14620.00	9035.51				MinPt-CtCt		
	6657.52	132.46	6569.79	6525.06	76.11	OSF1.50	14720.00	9036.78				MINPT-O-EQU		
	6659.76	135.06	6569.30	6524.71	74.66	OSF1.50	14820.00	9038.05				MinPt-O-ADP		
	7918.07	424.39	7634.71	7493.68	28.07	OSF1.50	18908.36	9090.00				MinPt-O-SF		

			CONTROLLED
	Plot ref: <u>CHARTS 10000/10100/10200/10300/10400/10500/10600/10700/10800/10900/11000/11100/11200/11300/11400/11500/11600/11700/11800/11900/12000/12100/12200/12300/12400/12500/12600/12700/12800/12900/13000/13100/13200/13300/13400/13500/13600/13700/13800/13900/14000/14100/14200/14300/14400/14500/14600/14700/14800/14900/15000/15100/15200/15300/15400/15500/15600/15700/15800/15900/16000/16100/16200/16300/16400/16500/16600/16700/16800/16900/17000/17100/17200/17300/17400/17500/17600/17700/17800/17900/18000/18100/18200/18300/18400/18500/18600/18700/18800/18900/19000/19100/19200/19300/19400/19500/19600/19700/19800/19900/20000/20100/20200/20300/20400/20500/20600/20700/20800/20900/21000/21100/21200/21300/21400/21500/21600/21700/21800/21900/22000/22100/22200/22300/22400/22500/22600/22700/22800/22900/23000/23100/23200/23300/23400/23500/23600/23700/23800/23900/24000/24100/24200/24300/24400/24500/24600/24700/24800/24900/25000/25100/25200/25300/25400/25500/25600/25700/25800/25900/26000/26100/26200/26300/26400/26500/26600/26700/26800/26900/27000/27100/27200/27300/27400/27500/27600/27700/27800/27900/28000/28100/28200/28300/28400/28500/28600/28700/28800/28900/29000/29100/29200/29300/29400/29500/29600/29700/29800/29900/30000/30100/30200/30300/30400/30500/30600/30700/30800/30900/31000/31100/31200/31300/31400/31500/31600/31700/31800/31900/32000/32100/32200/32300/32400/32500/32600/32700/32800/32900/33000/33100/33200/33300/33400/33500/33600/33700/33800/33900/34000/34100/34200/34300/34400/34500/34600/34700/34800/34900/35000/35100/35200/35300/35400/35500/35600/35700/35800/35900/36000/36100/36200/36300/36400/36500/36600/36700/36800/36900/37000/37100/37200/37300/37400/37500/37600/37700/37800/37900/38000/38100/38200/38300/38400/38500/38600/38700/38800/38900/39000/39100/39200/39300/39400/39500/39600/39700/39800/39900/40000/40100/40200/40300/40400/40500/40600/40700/40800/40900/41000/41100/41200/41300/41400/41500/41600/41700/41800/41900/42000/42100/42200/42300/42400/42500/42600/42700/42800/42900/43000/43100/43200/43300/43400/43500/43600/43700/43800/43900/44000/44100/44200/44300/44400/44500/44600/44700/44800/44900/45000/45100/45200/45300/45400/45500/45600/45700/45800/45900/46000/46100/46200/46300/46400/46500/46600/46700/46800/46900/47000/47100/47200/47300/47400/47500/47600/47700/47800/47900/48000/48100/48200/48300/48400/48500/48600/48700/48800/48900/49000/49100/49200/49300/49400/49500/49600/49700/49800/49900/50000/50100/50200/50300/50400/50500/50600/50700/50800/50900/51000/51100/51200/51300/51400/51500/51600/51700/51800/51900/52000/52100/52200/52300/52400/52500/52600/52700/52800/52900/53000/53100/53200/53300/53400/53500/53600/53700/53800/53900/54000/54100/54200/54300/54400/54500/54600/54700/54800/54900/55000/55100/55200/55300/55400/55500/55600/55700/55800/55900/56000/56100/56200/56300/56400/56500/56600/56700/56800/56900/57000/57100/57200/57300/57400/57500/57600/57700/57800/57900/58000/58100/58200/58300/58400/58500/58600/58700/58800/58900/59000/59100/59200/59300/59400/59500/59600/59700/59800/59900/60000/60100/60200/60300/60400/60500/60600/60700/60800/60900/61000/61100/61200/61300/61400/61500/61600/61700/61800/61900/62000/62100/62200/62300/62400/62500/62600/62700/62800/62900/63000/63100/63200/63300/63400/63500/63600/63700/63800/63900/64000/64100/64200/64300/64400/64500/64600/64700/64800/64900/65000/65100/65200/65300/65400/65500/65600/65700/65800/65900/66000/66100/66200/66300/66400/66500/66600/66700/66800/66900/67000/67100/67200/67300/67400/67500/67600/67700/67800/67900/68000/68100/68200/68300/68400/68500/68600/68700/68800/68900/69000/69100/69200/69300/69400/69500/69600/69700/69800/69900/70000/70100/70200/70300/70400/70500/70600/70700/70800/70900/71000/71100/71200/71300/71400/71500/71600/71700/71800/71900/72000/72100/72200/72300/72400/72500/72600/72700/72800/72900/73000/73100/73200/73300/73400/73500/73600/73700/73800/73900/74000/74100/74200/74300/74400/74500</u>		





Cimarex Parkway 15-14 North State Com 2H Rev8 RM 28Feb20 Proposal
Geodetic Report
(Def Plan)



Report Date: February 28, 2020 - 03:30 PM
Client: Cimarex Energy
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Parkway 15-14 North State Com 2H / New Slot
Well: Parkway 15-14 North State Com 2H
Borehole: Parkway 15-14 North State Com 2H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Parkway 15-14 North State Com 2H Rev8 RM 28Feb20
Survey Date: September 17, 2019
Tort / AHD / DDI / ERD Ratio: 130.963 ° / 11043.128 ft / 6.478 / 1.215
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 39' 52.81364", W 104° 4' 11.79446"
Location Grid N/E Y/X: N 605638.700 ftUS, E 622391.020 ftUS
CRS Grid Convergence Angle: 0.1422 °
Grid Scale Factor: 0.99991661
Version / Patch: 2.10.787.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 90.285 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3367.500 ft above MSL
Seabed / Ground Elevation: 3344.500 ft above MSL
Magnetic Declination: 7.214 °
Total Gravity Field Strength: 998.5142mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47915.160 nT
Magnetic Dip Angle: 60.394 °
Declination Date: February 27, 2020
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.1422 °
Total Corr Mag North->Grid North: 7.0719 °

Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL [1230' FNL, 390' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	605638.70	622391.02	N 32 39 52.81 W 104 4 11.79	
Nudge 2°/100' DLS	2000.00	0.00	180.00	2000.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81 W 104 4 11.79	
Hold Nudge	2640.03	12.80	180.00	2634.72	0.35	-71.20	0.00	2.00	605567.51	622391.02	N 32 39 52.11 W 104 4 11.80	
Drop to Vertical 2°/100' DLS	6398.73	12.80	180.00	6300.00	4.50	-903.97	0.00	0.00	604734.81	622391.02	N 32 39 43.87 W 104 4 11.82	
Hold Vertical	7038.76	0.00	180.00	6934.72	4.85	-975.17	0.00	2.00	604663.61	622391.02	N 32 39 43.16 W 104 4 11.82	
KOP - Build 12°/100' DLS	8566.66	0.00	180.00	8462.62	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16 W 104 4 11.82	
Landing Point - Hold to 4900' VS	9307.70	88.93	90.29	8940.00	473.36	-977.50	468.51	12.00	604661.28	622859.49	N 32 39 43.13 W 104 4 6.34	
Turn 2°/100' DLS	13735.12	88.93	90.29	9023.00	4900.00	-999.52	4895.09	0.00	604639.27	627285.69	N 32 39 42.80 W 104 3 14.57	
Hold	14146.18	89.27	98.50	9029.48	5309.60	-1030.97	5304.54	2.00	604607.81	627695.11	N 32 39 42.48 W 104 3 9.78	
Align to Target	14288.38	89.27	98.50	9031.28	5450.33	-1051.99	5445.17	0.00	604586.80	627835.72	N 32 39 42.27 W 104 3 8.13	
Hold to Target	14699.09	89.27	90.29	9036.51	5859.61	-1083.42	5854.29	2.00	604555.38	628244.81	N 32 39 41.94 W 104 3 3.35	
Cimarex Parkway 15-14 North State Com 2H - PHBL [2284' FNL, 100' FEL]	18908.36	89.27	90.29	9090.00	10068.54	-1104.35	10063.17	0.00	604534.44	632453.33	N 32 39 41.62 W 104 2 14.12	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
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Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	23.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Parkway 15-14 North State Com 2H / Cimarex Parkway 15-14 North State Com 2H Rev8 RM 28Feb20
	1	23.000	18908.364	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Parkway 15-14 North State Com 2H / Cimarex Parkway 15-14 North



Cimarex Parkway 15-14 North State Com 2H Rev8 RM 28Feb20 Proposal
Geodetic Report
(Def Plan)



Report Date: February 28, 2020 - 03:30 PM
Client: Cimarex Energy
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Parkway 15-14 North State Com 2H / New Slot
Well: Parkway 15-14 North State Com 2H
Borehole: Parkway 15-14 North State Com 2H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Parkway 15-14 North State Com 2H Rev8 RM 28Feb20
Survey Date: September 17, 2019
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Magnetic Dip Angle: 60.394 °
Declination Date: February 27, 2020
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.1422 °
Total Corr Mag North->Grid North: 7.0719 °
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL [1230' FNL, 390' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	100.00	0.00	180.00	100.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	200.00	0.00	180.00	200.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
Rustler	300.00	0.00	180.00	300.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
Top Salt	340.00	0.00	180.00	340.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	400.00	0.00	180.00	400.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	500.00	0.00	180.00	500.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	600.00	0.00	180.00	600.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	700.00	0.00	180.00	700.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	800.00	0.00	180.00	800.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	900.00	0.00	180.00	900.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
Base Salt	930.00	0.00	180.00	930.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	1000.00	0.00	180.00	1000.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	1100.00	0.00	180.00	1100.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
Yates	1200.00	0.00	180.00	1200.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	1300.00	0.00	180.00	1300.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	1400.00	0.00	180.00	1400.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	1500.00	0.00	180.00	1500.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	1600.00	0.00	180.00	1600.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	1700.00	0.00	180.00	1700.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	1800.00	0.00	180.00	1800.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
	1900.00	0.00	180.00	1900.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79
Nudge 2°/100' DLS	2000.00	0.00	180.00	2000.00	0.00	0.00	0.00	0.00	605638.70	622391.02	N 32 39 52.81	W 104 4 11.79

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Queen	2100.00	2.00	180.00	2099.98	0.01	-1.75	0.00	2.00	605636.95	622391.02	N 32 39 52.80	W 104 4 11.79
	2140.06	2.80	180.00	2140.00	0.02	-3.42	0.00	2.00	605635.28	622391.02	N 32 39 52.78	W 104 4 11.79
	2200.00	4.00	180.00	2199.84	0.03	-6.98	0.00	2.00	605631.72	622391.02	N 32 39 52.74	W 104 4 11.79
	2300.00	6.00	180.00	2299.45	0.08	-15.69	0.00	2.00	605623.01	622391.02	N 32 39 52.66	W 104 4 11.79
	2400.00	8.00	180.00	2398.70	0.14	-27.88	0.00	2.00	605610.82	622391.02	N 32 39 52.54	W 104 4 11.80
Hold Nudge	2500.00	10.00	180.00	2497.47	0.22	-43.52	0.00	2.00	605595.18	622391.02	N 32 39 52.38	W 104 4 11.80
	2600.00	12.00	180.00	2595.62	0.31	-62.60	0.00	2.00	605576.10	622391.02	N 32 39 52.19	W 104 4 11.80
	2640.03	12.80	180.00	2634.72	0.35	-71.20	0.00	2.00	605567.51	622391.02	N 32 39 52.11	W 104 4 11.80
	2700.00	12.80	180.00	2693.20	0.42	-84.49	0.00	0.00	605554.22	622391.02	N 32 39 51.98	W 104 4 11.80
	2800.00	12.80	180.00	2790.71	0.53	-106.64	0.00	0.00	605532.07	622391.02	N 32 39 51.76	W 104 4 11.80
Capitan	2900.00	12.80	180.00	2888.23	0.64	-128.80	0.00	0.00	605509.91	622391.02	N 32 39 51.54	W 104 4 11.80
	3000.00	12.80	180.00	2985.74	0.75	-150.95	0.00	0.00	605487.76	622391.02	N 32 39 51.32	W 104 4 11.80
	3100.00	12.80	180.00	3083.26	0.86	-173.11	0.00	0.00	605465.61	622391.02	N 32 39 51.10	W 104 4 11.80
	3112.04	12.80	180.00	3095.00	0.87	-175.78	0.00	0.00	605462.94	622391.02	N 32 39 51.07	W 104 4 11.80
	3200.00	12.80	180.00	3180.77	0.97	-195.26	0.00	0.00	605443.45	622391.02	N 32 39 50.88	W 104 4 11.80
	3300.00	12.80	180.00	3278.29	1.08	-217.42	0.00	0.00	605421.30	622391.02	N 32 39 50.66	W 104 4 11.80
	3400.00	12.80	180.00	3375.80	1.19	-239.58	0.00	0.00	605399.14	622391.02	N 32 39 50.44	W 104 4 11.80
	3500.00	12.80	180.00	3473.32	1.30	-261.73	0.00	0.00	605376.99	622391.02	N 32 39 50.22	W 104 4 11.80
	3600.00	12.80	180.00	3570.83	1.41	-283.89	0.00	0.00	605354.84	622391.02	N 32 39 50.00	W 104 4 11.80
	3700.00	12.80	180.00	3668.35	1.52	-306.04	0.00	0.00	605332.68	622391.02	N 32 39 49.79	W 104 4 11.80
	3800.00	12.80	180.00	3765.86	1.63	-328.20	0.00	0.00	605310.53	622391.02	N 32 39 49.57	W 104 4 11.80
	3900.00	12.80	180.00	3863.37	1.74	-350.36	0.00	0.00	605288.37	622391.02	N 32 39 49.35	W 104 4 11.80
	4000.00	12.80	180.00	3960.89	1.85	-372.51	0.00	0.00	605266.22	622391.02	N 32 39 49.13	W 104 4 11.81
	4100.00	12.80	180.00	4058.40	1.96	-394.67	0.00	0.00	605244.07	622391.02	N 32 39 48.91	W 104 4 11.81
	4200.00	12.80	180.00	4155.92	2.07	-416.82	0.00	0.00	605221.91	622391.02	N 32 39 48.69	W 104 4 11.81
	4300.00	12.80	180.00	4253.43	2.18	-438.98	0.00	0.00	605199.76	622391.02	N 32 39 48.47	W 104 4 11.81
	4400.00	12.80	180.00	4350.95	2.29	-461.14	0.00	0.00	605177.60	622391.02	N 32 39 48.25	W 104 4 11.81
	4500.00	12.80	180.00	4448.46	2.40	-483.29	0.00	0.00	605155.45	622391.02	N 32 39 48.03	W 104 4 11.81
	4600.00	12.80	180.00	4545.98	2.51	-505.45	0.00	0.00	605133.30	622391.02	N 32 39 47.81	W 104 4 11.81
	4700.00	12.80	180.00	4643.49	2.62	-527.60	0.00	0.00	605111.14	622391.02	N 32 39 47.59	W 104 4 11.81
	4800.00	12.80	180.00	4741.01	2.73	-549.76	0.00	0.00	605088.99	622391.02	N 32 39 47.37	W 104 4 11.81
	4900.00	12.80	180.00	4838.52	2.84	-571.91	0.00	0.00	605066.83	622391.02	N 32 39 47.15	W 104 4 11.81
	5000.00	12.80	180.00	4936.04	2.96	-594.07	0.00	0.00	605044.68	622391.02	N 32 39 46.94	W 104 4 11.81
	5100.00	12.80	180.00	5033.55	3.07	-616.23	0.00	0.00	605022.53	622391.02	N 32 39 46.72	W 104 4 11.81
	5200.00	12.80	180.00	5131.07	3.18	-638.38	0.00	0.00	605000.37	622391.02	N 32 39 46.50	W 104 4 11.81
	5300.00	12.80	180.00	5228.58	3.29	-660.54	0.00	0.00	604978.22	622391.02	N 32 39 46.28	W 104 4 11.81
	5400.00	12.80	180.00	5326.10	3.40	-682.69	0.00	0.00	604956.06	622391.02	N 32 39 46.06	W 104 4 11.81
	5500.00	12.80	180.00	5423.61	3.51	-704.85	0.00	0.00	604933.91	622391.02	N 32 39 45.84	W 104 4 11.81
	5600.00	12.80	180.00	5521.12	3.62	-727.01	0.00	0.00	604911.76	622391.02	N 32 39 45.62	W 104 4 11.82
	5700.00	12.80	180.00	5618.64	3.73	-749.16	0.00	0.00	604889.60	622391.02	N 32 39 45.40	W 104 4 11.82
	5800.00	12.80	180.00	5716.15	3.84	-771.32	0.00	0.00	604867.45	622391.02	N 32 39 45.18	W 104 4 11.82
	5900.00	12.80	180.00	5813.67	3.95	-793.47	0.00	0.00	604845.29	622391.02	N 32 39 44.96	W 104 4 11.82
	6000.00	12.80	180.00	5911.18	4.06	-815.63	0.00	0.00	604823.14	622391.02	N 32 39 44.74	W 104 4 11.82
	6100.00	12.80	180.00	6008.70	4.17	-837.78	0.00	0.00	604800.99	622391.02	N 32 39 44.52	W 104 4 11.82
	6200.00	12.80	180.00	6106.21	4.28	-859.94	0.00	0.00	604778.83	622391.02	N 32 39 44.31	W 104 4 11.82
	6300.00	12.80	180.00	6203.73	4.39	-882.10	0.00	0.00	604756.68	622391.02	N 32 39 44.09	W 104 4 11.82
Drop to Vertical 2°/100' DLS	6398.73	12.80	180.00	6300.00	4.50	-903.97	0.00	0.00	604734.81	622391.02	N 32 39 43.87	W 104 4 11.82
	6400.00	12.78	180.00	6301.24	4.50	-904.25	0.00	2.00	604734.52	622391.02	N 32 39 43.87	W 104 4 11.82
	6500.00	10.78	180.00	6399.13	4.60	-924.66	0.00	2.00	604714.12	622391.02	N 32 39 43.66	W 104 4 11.82
	6600.00	8.78	180.00	6497.68	4.68	-941.64	0.00	2.00	604697.14	622391.02	N 32 39 43.50	W 104 4 11.82
	6700.00	6.78	180.00	6596.75	4.75	-955.16	0.00	2.00	604683.62	622391.02	N 32 39 43.36	W 104 4 11.82
	6800.00	4.78	180.00	6696.24	4.80	-965.23	0.00	2.00	604673.56	622391.02	N 32 39 43.26	W 104 4 11.82
	6900.00	2.78	180.00	6796.02	4.83	-971.81	0.00	2.00	604666.97	622391.02	N 32 39 43.20	W 104 4 11.82

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Hold Vertical 1st BS Sand	7000.00	0.78	180.00	6895.96	4.85	-974.91	0.00	2.00	604663.88	622391.02	N 32 39 43.17	W 104 4 11.82
	7038.76	0.00	180.00	6934.72	4.85	-975.17	0.00	2.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	7054.04	0.00	180.00	6950.00	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	7100.00	0.00	180.00	6995.96	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	7200.00	0.00	180.00	7095.96	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	7300.00	0.00	180.00	7195.96	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	7400.00	0.00	180.00	7295.96	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	7500.00	0.00	180.00	7395.96	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	7600.00	0.00	180.00	7495.96	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	7700.00	0.00	180.00	7595.96	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
2nd BS Sand	7800.00	0.00	180.00	7695.96	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	7814.04	0.00	180.00	7710.00	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	7900.00	0.00	180.00	7795.96	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	8000.00	0.00	180.00	7895.96	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	8100.00	0.00	180.00	7995.96	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	8200.00	0.00	180.00	8095.96	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	8300.00	0.00	180.00	8195.96	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	8400.00	0.00	180.00	8295.96	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
	8500.00	0.00	180.00	8395.96	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
KOP - Build 12°/100' DLS	8566.66	0.00	180.00	8462.62	4.85	-975.17	0.00	0.00	604663.61	622391.02	N 32 39 43.16	W 104 4 11.82
3rd BS Sand	8600.00	4.00	90.29	8495.94	6.01	-975.17	1.16	12.00	604663.61	622392.18	N 32 39 43.16	W 104 4 11.81
	8700.00	16.00	90.29	8594.24	23.35	-975.26	18.50	12.00	604663.52	622409.52	N 32 39 43.16	W 104 4 11.61
	8800.00	28.00	90.29	8686.78	60.74	-975.45	55.89	12.00	604663.34	622446.91	N 32 39 43.16	W 104 4 11.17
	8815.10	29.81	90.29	8700.00	68.04	-975.48	63.19	12.00	604663.30	622454.20	N 32 39 43.16	W 104 4 11.08
	8900.00	40.00	90.29	8769.54	116.56	-975.72	111.71	12.00	604663.06	622502.72	N 32 39 43.16	W 104 4 10.52
	9000.00	52.00	90.29	8838.87	188.37	-976.08	183.51	12.00	604662.70	622574.52	N 32 39 43.15	W 104 4 9.68
	9100.00	64.00	90.29	8891.77	273.02	-976.50	268.16	12.00	604662.28	622659.16	N 32 39 43.15	W 104 4 8.69
	9200.00	76.00	90.29	8925.90	366.82	-976.97	361.96	12.00	604661.81	622752.95	N 32 39 43.14	W 104 4 7.59
	9300.00	88.00	90.29	8939.79	465.66	-977.46	460.81	12.00	604661.32	622851.79	N 32 39 43.13	W 104 4 6.43
Landing Point - Hold to 4900' VS	9307.70	88.93	90.29	8940.00	473.36	-977.50	468.51	12.00	604661.28	622859.49	N 32 39 43.13	W 104 4 6.34
	9400.00	88.93	90.29	8941.73	565.64	-977.96	560.79	0.00	604660.83	622951.76	N 32 39 43.12	W 104 4 5.26
	9500.00	88.93	90.29	8943.60	665.63	-978.46	660.77	0.00	604660.33	623051.73	N 32 39 43.12	W 104 4 4.09
	9600.00	88.93	90.29	8945.48	765.61	-978.95	760.75	0.00	604659.83	623151.70	N 32 39 43.11	W 104 4 2.92
	9700.00	88.93	90.29	8947.35	865.59	-979.45	860.73	0.00	604659.33	623251.68	N 32 39 43.10	W 104 4 1.75
	9800.00	88.93	90.29	8949.23	965.57	-979.95	960.71	0.00	604658.84	623351.65	N 32 39 43.09	W 104 4 0.59
	9900.00	88.93	90.29	8951.10	1065.56	-980.45	1060.69	0.00	604658.34	623451.62	N 32 39 43.09	W 104 3 59.42
	10000.00	88.93	90.29	8952.98	1165.54	-980.94	1160.67	0.00	604657.84	623551.59	N 32 39 43.08	W 104 3 58.25
	10100.00	88.93	90.29	8954.85	1265.52	-981.44	1260.65	0.00	604657.34	623651.57	N 32 39 43.07	W 104 3 57.08
	10200.00	88.93	90.29	8956.73	1365.50	-981.94	1360.64	0.00	604656.85	623751.54	N 32 39 43.06	W 104 3 55.91
	10300.00	88.93	90.29	8958.60	1465.49	-982.43	1460.62	0.00	604656.35	623851.51	N 32 39 43.06	W 104 3 54.74
	10400.00	88.93	90.29	8960.48	1565.47	-982.93	1560.60	0.00	604655.85	623951.48	N 32 39 43.05	W 104 3 53.57
	10500.00	88.93	90.29	8962.35	1665.45	-983.43	1660.58	0.00	604655.35	624051.46	N 32 39 43.04	W 104 3 52.40
	10600.00	88.93	90.29	8964.23	1765.43	-983.93	1760.56	0.00	604654.86	624151.43	N 32 39 43.03	W 104 3 51.23
	10700.00	88.93	90.29	8966.10	1865.42	-984.42	1860.54	0.00	604654.36	624251.40	N 32 39 43.03	W 104 3 50.06
	10800.00	88.93	90.29	8967.98	1965.40	-984.92	1960.52	0.00	604653.86	624351.38	N 32 39 43.02	W 104 3 48.89
	10900.00	88.93	90.29	8969.85	2065.38	-985.42	2060.50	0.00	604653.37	624451.35	N 32 39 43.01	W 104 3 47.72
	11000.00	88.93	90.29	8971.73	2165.36	-985.92	2160.49	0.00	604652.87	624551.32	N 32 39 43.00	W 104 3 46.55
	11100.00	88.93	90.29	8973.60	2265.35	-986.41	2260.47	0.00	604652.37	624651.29	N 32 39 43.00	W 104 3 45.38
	11200.00	88.93	90.29	8975.47	2365.33	-986.91	2360.45	0.00	604651.87	624751.27	N 32 39 42.99	W 104 3 44.21
	11300.00	88.93	90.29	8977.35	2465.31	-987.41	2460.43	0.00	604651.38	624851.24	N 32 39 42.98	W 104 3 43.04
	11400.00	88.93	90.29	8979.22	2565.29	-987.91	2560.41	0.00	604650.88	624951.21	N 32 39 42.98	W 104 3 41.87

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	11500.00	88.93	90.29	8981.10	2665.27	-988.40	2660.39	0.00	604650.38	625051.18	N 32 39 42.97 W 104	3 40.70
	11600.00	88.93	90.29	8982.97	2765.26	-988.90	2760.37	0.00	604649.88	625151.16	N 32 39 42.96 W 104	3 39.53
	11700.00	88.93	90.29	8984.85	2865.24	-989.40	2860.35	0.00	604649.39	625251.13	N 32 39 42.95 W 104	3 38.37
	11800.00	88.93	90.29	8986.72	2965.22	-989.90	2960.33	0.00	604648.89	625351.10	N 32 39 42.95 W 104	3 37.20
	11900.00	88.93	90.29	8988.60	3065.20	-990.39	3060.32	0.00	604648.39	625451.07	N 32 39 42.94 W 104	3 36.03
	12000.00	88.93	90.29	8990.47	3165.19	-990.89	3160.30	0.00	604647.89	625551.05	N 32 39 42.93 W 104	3 34.86
	12100.00	88.93	90.29	8992.35	3265.17	-991.39	3260.28	0.00	604647.40	625651.02	N 32 39 42.92 W 104	3 33.69
	12200.00	88.93	90.29	8994.22	3365.15	-991.88	3360.26	0.00	604646.90	625750.99	N 32 39 42.92 W 104	3 32.52
	12300.00	88.93	90.29	8996.10	3465.13	-992.38	3460.24	0.00	604646.40	625850.97	N 32 39 42.91 W 104	3 31.35
	12400.00	88.93	90.29	8997.97	3565.12	-992.88	3560.22	0.00	604645.91	625950.94	N 32 39 42.90 W 104	3 30.18
	12500.00	88.93	90.29	8999.85	3665.10	-993.38	3660.20	0.00	604645.41	626050.91	N 32 39 42.89 W 104	3 29.01
	12600.00	88.93	90.29	9001.72	3765.08	-993.87	3760.18	0.00	604644.91	626150.88	N 32 39 42.89 W 104	3 27.84
	12700.00	88.93	90.29	9003.59	3865.06	-994.37	3860.17	0.00	604644.41	626250.86	N 32 39 42.88 W 104	3 26.67
	12800.00	88.93	90.29	9005.47	3965.05	-994.87	3960.15	0.00	604643.92	626350.83	N 32 39 42.87 W 104	3 25.50
	12900.00	88.93	90.29	9007.34	4065.03	-995.37	4060.13	0.00	604643.42	626450.80	N 32 39 42.86 W 104	3 24.33
	13000.00	88.93	90.29	9009.22	4165.01	-995.86	4160.11	0.00	604642.92	626550.77	N 32 39 42.86 W 104	3 23.16
	13100.00	88.93	90.29	9011.09	4264.99	-996.36	4260.09	0.00	604642.42	626650.75	N 32 39 42.85 W 104	3 21.99
	13200.00	88.93	90.29	9012.97	4364.98	-996.86	4360.07	0.00	604641.93	626750.72	N 32 39 42.84 W 104	3 20.82
	13300.00	88.93	90.29	9014.84	4464.96	-997.36	4460.05	0.00	604641.43	626850.69	N 32 39 42.83 W 104	3 19.65
	13400.00	88.93	90.29	9016.72	4564.94	-997.85	4560.03	0.00	604640.93	626950.66	N 32 39 42.83 W 104	3 18.48
	13500.00	88.93	90.29	9018.59	4664.92	-998.35	4660.02	0.00	604640.43	627050.64	N 32 39 42.82 W 104	3 17.32
	13600.00	88.93	90.29	9020.47	4764.91	-998.85	4760.00	0.00	604639.94	627150.61	N 32 39 42.81 W 104	3 16.15
	13700.00	88.93	90.29	9022.34	4864.89	-999.35	4859.98	0.00	604639.44	627250.58	N 32 39 42.80 W 104	3 14.98
Turn 2°/100' DLS	13735.12	88.93	90.29	9023.00	4900.00	-999.52	4895.09	0.00	604639.27	627285.69	N 32 39 42.80 W 104	3 14.57
	13800.00	88.98	91.58	9024.19	4964.87	-1000.58	4959.95	2.00	604638.21	627350.55	N 32 39 42.79 W 104	3 13.81
	13900.00	89.06	93.58	9025.90	5064.77	-1005.08	5059.83	2.00	604633.71	627450.42	N 32 39 42.74 W 104	3 12.64
	14000.00	89.15	95.58	9027.46	5164.47	-1013.06	5159.49	2.00	604625.72	627550.07	N 32 39 42.66 W 104	3 11.47
	14100.00	89.23	97.58	9028.87	5263.85	-1024.52	5258.82	2.00	604614.27	627649.39	N 32 39 42.54 W 104	3 10.31
Hold	14146.18	89.27	98.50	9029.48	5309.60	-1030.97	5304.54	2.00	604607.81	627695.11	N 32 39 42.48 W 104	3 9.78
Wolfcamp	14187.40	89.27	98.50	9030.00	5350.40	-1037.07	5345.31	0.00	604601.72	627735.87	N 32 39 42.42 W 104	3 9.30
	14200.00	89.27	98.50	9030.16	5362.87	-1038.93	5357.77	0.00	604599.86	627748.33	N 32 39 42.40 W 104	3 9.15
Align to Target	14288.38	89.27	98.50	9031.28	5450.33	-1051.99	5445.17	0.00	604586.80	627835.72	N 32 39 42.27 W 104	3 8.13
	14300.00	89.27	98.27	9031.43	5461.84	-1053.68	5456.66	2.00	604585.11	627847.22	N 32 39 42.25 W 104	3 8.00
	14400.00	89.27	96.27	9032.70	5561.08	-1066.33	5555.85	2.00	604572.46	627946.39	N 32 39 42.12 W 104	3 6.84
	14500.00	89.27	94.27	9033.98	5660.69	-1075.51	5655.41	2.00	604563.28	628045.95	N 32 39 42.03 W 104	3 5.67
	14600.00	89.27	92.27	9035.25	5760.54	-1081.21	5755.23	2.00	604557.58	628145.76	N 32 39 41.97 W 104	3 4.51
Hold to Target	14699.09	89.27	90.29	9036.51	5859.61	-1083.42	5854.29	2.00	604555.38	628244.81	N 32 39 41.94 W 104	3 3.35
	14700.00	89.27	90.29	9036.52	5860.51	-1083.42	5855.20	0.00	604555.37	628245.72	N 32 39 41.94 W 104	3 3.34
	14800.00	89.27	90.29	9037.79	5960.51	-1083.92	5955.19	0.00	604554.87	628345.70	N 32 39 41.94 W 104	3 2.17
	14900.00	89.27	90.29	9039.06	6060.50	-1084.42	6055.18	0.00	604554.38	628445.68	N 32 39 41.93 W 104	3 1.00
	15000.00	89.27	90.29	9040.34	6160.49	-1084.91	6155.17	0.00	604553.88	628545.66	N 32 39 41.92 W 104	2 59.83
	15100.00	89.27	90.29	9041.61	6260.48	-1085.41	6255.16	0.00	604553.38	628645.65	N 32 39 41.91 W 104	2 58.66
	15200.00	89.27	90.29	9042.88	6360.47	-1085.91	6355.15	0.00	604552.88	628745.63	N 32 39 41.91 W 104	2 57.49
	15300.00	89.27	90.29	9044.15	6460.47	-1086.41	6455.14	0.00	604552.39	628845.61	N 32 39 41.90 W 104	2 56.32
	15400.00	89.27	90.29	9045.42	6560.46	-1086.90	6555.13	0.00	604551.89	628945.59	N 32 39 41.89 W 104	2 55.15
	15500.00	89.27	90.29	9046.69	6660.45	-1087.40	6655.12	0.00	604551.39	629045.57	N 32 39 41.88 W 104	2 53.98
	15600.00	89.27	90.29	9047.96	6760.44	-1087.90	6755.11	0.00	604550.89	629145.56	N 32 39 41.88 W 104	2 52.81
	15700.00	89.27	90.29	9049.23	6860.43	-1088.40	6855.10	0.00	604550.40	629245.54	N 32 39 41.87 W 104	2 51.64
	15800.00	89.27	90.29	9050.50	6960.43	-1088.89	6955.09	0.00	604549.90	629345.52	N 32 39 41.86 W 104	2 50.47
	15900.00	89.27	90.29	9051.77	7060.42	-1089.39	7055.09	0.00	604549.40	629445.50	N 32 39 41.85 W 104	2 49.30
	16000.00	89.27	90.29	9053.04	7160.41	-1089.89	7155.08	0.00	604548.91	629545.49	N 32 39 41.85 W 104	2 48.13
	16100.00	89.27	90.29	9054.31	7260.40	-1090.39	7255.07	0.00	604548.41	629645.47	N 32 39 41.84 W 104	2 46.96
	16200.00	89.27	90.29	9055.58	7360.39	-1090.88	7355.06	0.00	604547.91	629745.45	N 32 39 41.83 W 104	2 45.79

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	16300.00	89.27	90.29	9056.85	7460.38	-1091.38	7455.05	0.00	604547.41	629845.43	N 32 39 41.82 W 104	2 44.62
	16400.00	89.27	90.29	9058.13	7560.38	-1091.88	7555.04	0.00	604546.92	629945.41	N 32 39 41.82 W 104	2 43.45
	16500.00	89.27	90.29	9059.40	7660.37	-1092.37	7655.03	0.00	604546.42	630045.40	N 32 39 41.81 W 104	2 42.29
	16600.00	89.27	90.29	9060.67	7760.36	-1092.87	7755.02	0.00	604545.92	630145.38	N 32 39 41.80 W 104	2 41.12
	16700.00	89.27	90.29	9061.94	7860.35	-1093.37	7855.01	0.00	604545.42	630245.36	N 32 39 41.79 W 104	2 39.95
	16800.00	89.27	90.29	9063.21	7960.34	-1093.87	7955.00	0.00	604544.93	630345.34	N 32 39 41.79 W 104	2 38.78
	16900.00	89.27	90.29	9064.48	8060.34	-1094.36	8054.99	0.00	604544.43	630445.32	N 32 39 41.78 W 104	2 37.61
	17000.00	89.27	90.29	9065.75	8160.33	-1094.86	8154.98	0.00	604543.93	630545.31	N 32 39 41.77 W 104	2 36.44
	17100.00	89.27	90.29	9067.02	8260.32	-1095.36	8254.97	0.00	604543.43	630645.29	N 32 39 41.76 W 104	2 35.27
	17200.00	89.27	90.29	9068.29	8360.31	-1095.86	8354.96	0.00	604542.94	630745.27	N 32 39 41.76 W 104	2 34.10
	17300.00	89.27	90.29	9069.56	8460.30	-1096.35	8454.96	0.00	604542.44	630845.25	N 32 39 41.75 W 104	2 32.93
	17400.00	89.27	90.29	9070.83	8560.30	-1096.85	8554.95	0.00	604541.94	630945.24	N 32 39 41.74 W 104	2 31.76
	17500.00	89.27	90.29	9072.10	8660.29	-1097.35	8654.94	0.00	604541.44	631045.22	N 32 39 41.73 W 104	2 30.59
	17600.00	89.27	90.29	9073.37	8760.28	-1097.85	8754.93	0.00	604540.95	631145.20	N 32 39 41.72 W 104	2 29.42
	17700.00	89.27	90.29	9074.64	8860.27	-1098.34	8854.92	0.00	604540.45	631245.18	N 32 39 41.72 W 104	2 28.25
	17800.00	89.27	90.29	9075.92	8960.26	-1098.84	8954.91	0.00	604539.95	631345.16	N 32 39 41.71 W 104	2 27.08
	17900.00	89.27	90.29	9077.19	9060.26	-1099.34	9054.90	0.00	604539.46	631445.15	N 32 39 41.70 W 104	2 25.91
	18000.00	89.27	90.29	9078.46	9160.25	-1099.84	9154.89	0.00	604538.96	631545.13	N 32 39 41.69 W 104	2 24.74
	18100.00	89.27	90.29	9079.73	9260.24	-1100.33	9254.88	0.00	604538.46	631645.11	N 32 39 41.69 W 104	2 23.57
	18200.00	89.27	90.29	9081.00	9360.23	-1100.83	9354.87	0.00	604537.96	631745.09	N 32 39 41.68 W 104	2 22.40
	18300.00	89.27	90.29	9082.27	9460.22	-1101.33	9454.86	0.00	604537.47	631845.07	N 32 39 41.67 W 104	2 21.23
	18400.00	89.27	90.29	9083.54	9560.22	-1101.83	9554.85	0.00	604536.97	631945.06	N 32 39 41.66 W 104	2 20.06
	18500.00	89.27	90.29	9084.81	9660.21	-1102.32	9654.84	0.00	604536.47	632045.04	N 32 39 41.66 W 104	2 18.89
	18600.00	89.27	90.29	9086.08	9760.20	-1102.82	9754.83	0.00	604535.97	632145.02	N 32 39 41.65 W 104	2 17.72
	18700.00	89.27	90.29	9087.35	9860.19	-1103.32	9854.82	0.00	604535.48	632245.00	N 32 39 41.64 W 104	2 16.55
	18800.00	89.27	90.29	9088.62	9960.18	-1103.82	9954.82	0.00	604534.98	632344.99	N 32 39 41.63 W 104	2 15.39
	18900.00	89.27	90.29	9089.89	10060.17	-1104.31	10054.81	0.00	604534.48	632444.97	N 32 39 41.62 W 104	2 14.22

Cimarex
Parkway 15-14
North State Com
2H - PHBL
[2284' FNL, 100'
FEL]

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	23.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Parkway 15-14 North State Com 2H / Cimarex Parkway 15-14 North State Com 2H Rev8 RM 28Feb20
	1	23.000	18908.364	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Parkway 15-14 North State Com 2H / Cimarex Parkway 15-14 North



Grid

True Mag



CONTROLLED	
Plot ref Drawing ref Copy number Date	COUNTRY/PROPERTY/TOPOGRAPHIC CASE SHEET REFERENCE 2014-01-28 at 3 18/01/2018

Grid North

Tot Cor ($M \rightarrow G$ 7.072")

Mag Dec (7.214°)

Grid Conv (0.142°)

