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 Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101
August 1, 2011

Permit 289549

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
CIMAREX ENERGY CO. OF COLORADO 600 N. Marienfeld Street Midland, TX 79701	162683
	3. API Number 30-025-48095

4. Property Code	5. Property Name	6. Well No.
329861	RED HILLS 32 5 STATE COM	198H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
A	32	25S	33E	A	467	N	390	E	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
P	5	26S	33E	P	100	S	1149	E	Lea

9. Pool Information

WC-025 G-09 S253236A;UPR WOLFCAMP	98158

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3390
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	22205	Wolfcamp		2/1/2021
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	14.75	10.75	40.5	984	488	0
Int1	9.875	7.625	29.7	12425	1570	0
Prod	6.75	5.5	20	11795	1004	12220
Prod	6.75	5	18	22204	1004	12220

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	5000	5000	Cameran
Annular	10000	10000	Cameran

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature:		**OIL CONSERVATION DIVISION**	
Printed Name:	Electronically filed by Terri Stathem	Approved By:	Paul F Kautz
Title:	Coord. Regulatory Compl	Title:	Geologist
Email Address:	tstathem@cimarex.com	Approved Date:	12/3/2020 Expiration Date: 12/3/2022
Date:	12/1/2020 Phone: 918-295-1763	Conditions of Approval Attached	

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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

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	[2] Pool Code	[3] Pool Name
30-025-46294	98158	WC-025 G09 S253236A; UPR Wolfcamp

[4] Property Code	[5] Property Name	[6] Well Number
	RED HILLS 32-5 State Com	198H

[7] OGRID No.	[8] Operator Name	[9] Elevation
162683	CIMAREX ENERGY CO. of Colorado	3389.7'

[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
A	32	25S	33E		467	NORTH	390	EAST	LEA

[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
P	5	26S	33E		100	SOUTH	1149	EAST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
1280			

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.

[16]

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°05'34.89" (32.093024°)
LONGITUDE = 103°35'13.34" (103.587038°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°05'34.44" (32.092900°)
LONGITUDE = 103°35'11.64" (103.586567°)
STATE PLANE NAD 83 (N.M. EAST)
N: 398378.77' E: 772449.19'
STATE PLANE NAD 27 (N.M. EAST)
N: 398321.14' E: 731262.71'

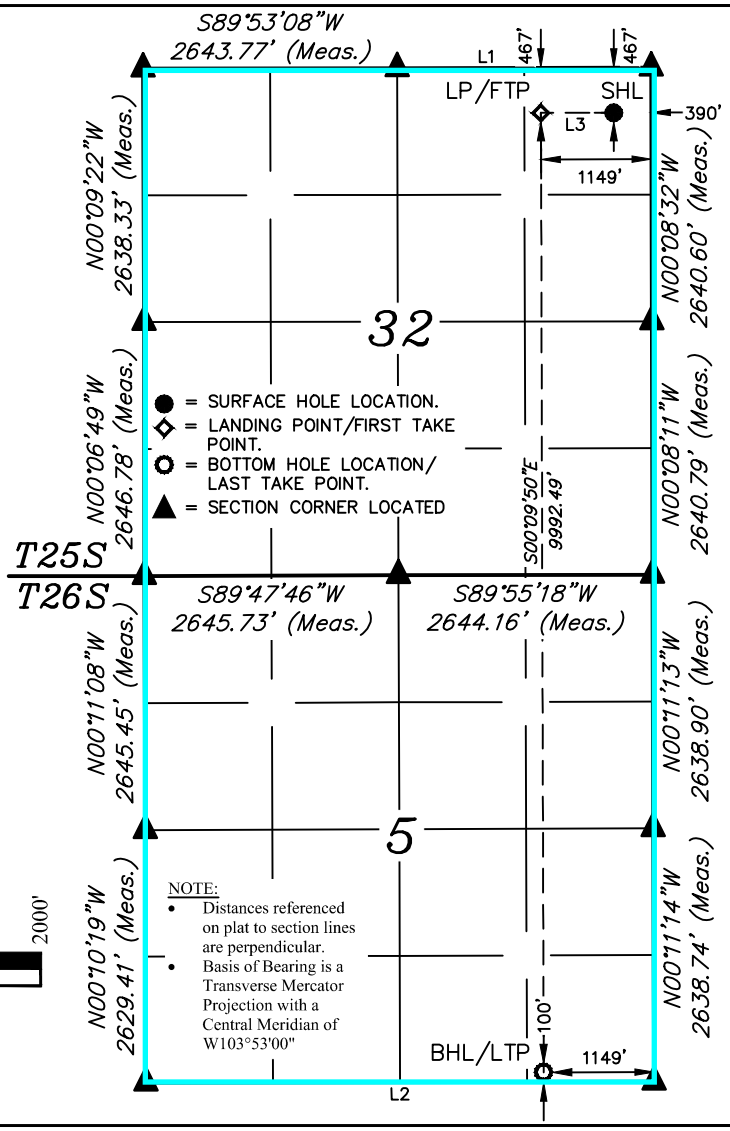
NAD 83 (LP/FTP)
LATITUDE = 32°05'34.90" (32.093028°)
LONGITUDE = 103°35'22.16" (103.589488°)
NAD 27 (LP/FTP)
LATITUDE = 32°05'34.45" (32.092903°)
LONGITUDE = 103°35'20.46" (103.589017°)
STATE PLANE NAD 83 (N.M. EAST)
N: 398374.74' E: 771690.40'
STATE PLANE NAD 27 (N.M. EAST)
N: 398317.12' E: 730503.93'

NAD 83 (BHL/LTP)
LATITUDE = 32°03'56.03" (32.065565°)
LONGITUDE = 103°35'22.14" (103.589484°)
NAD 27 (BHL/LTP)
LATITUDE = 32°03'55.58" (32.065440°)
LONGITUDE = 103°35'20.45" (103.589014°)
STATE PLANE NAD 83 (N.M. EAST)
N: 388384.21' E: 771760.67'
STATE PLANE NAD 27 (N.M. EAST)
N: 388326.84' E: 730573.73'

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S89°54'44"W	2645.70'
L2	S89°53'20"W	5290.67'
L3	S89°56'07"W	758.93'

2000' 1000' 0' 2000'

SCALE
DRAWN BY: R.J. 05-03-18
REV: 2 E.C. 10-22-20
(BHL MOVE)



[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.

Amithy Crawford 11/11/20
Signature Date

Amithy Crawford
Printed Name

acrawford@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.

May 01, 2018
Date of Survey

Signature and Seal of Professional Surveyor:

PAUL BUCHELE
NEW MEXICO
23782
PROFESSIONAL SURVEYOR
10-22-20

Certificate Number:

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Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

GAS CAPTURE PLAN

Date: 12/3/2020

☒ Original

☐ Amended - Reason for Amendment:

Operator & OGRID No.: [162683] CIMAREX ENERGY CO. OF COLORADO

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
RED HILLS 32 5 STATE COM #198H	30-025-48095	A-32-25S-33E	0467N 0390E	3600	None	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to DUKE ENERGY TRANSPORT & TRADING CO and will be connected to DUKE ENERGY TRANSPORT & TRADING CO High/Low Pressure gathering system located in Lea County, New Mexico. It will require 7555' of pipeline to connect the facility to High/Low Pressure gathering system. CIMAREX ENERGY CO. OF COLORADO provides (periodically) to DUKE ENERGY TRANSPORT & TRADING CO a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, CIMAREX ENERGY CO. OF COLORADO and DUKE ENERGY TRANSPORT & TRADING CO have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at DUKE ENERGY TRANSPORT & TRADING CO Processing Plant located in Sec. 26, Twn. 20S, Rng. 31E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on DUKE ENERGY TRANSPORT & TRADING CO system at that time. Based on current information, it is CIMAREX ENERGY CO. OF COLORADO's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Comments

Permit 289549

PERMIT COMMENTS

Operator Name and Address:	API Number:
CIMAREX ENERGY CO. OF COLORADO [162683] 600 N. Marienfeld Street Midland, TX 79701	30-025-48095
	Well: RED HILLS 32 5 STATE COM #198H

Created By	Comment	Comment Date

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1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Conditions

Permit 289549

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
CIMAREX ENERGY CO. OF COLORADO [162683] 600 N. Marienfeld Street Midland, TX 79701	30-025-48095
	Well: RED HILLS 32 5 STATE COM #198H

OCD Reviewer	Condition
pkautz	Will require a directional survey with the C-104
pkautz	1) SURFACE & INTERMEDIATE CASING - Cement must circulate to surface -- 2) PRODUCTION CASING - Cement must tie back into intermediate casing --
pkautz	If cement does not circulate to surface, must run temperature survey or other log to determine top of cement
pkautz	Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water
pkautz	1)- The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days 4)- Deviation / Directional Drill Survey are to be filed with or prior to C-104
pkautz	It is the operator's responsibility to monitor cancellation dates of approved APDs. APD's are good for 2 years and may be extended for one year. Only one 1 year extension will be granted if submitted by C-103 before expiration date. After expiration date or after a 1 year extension must submit new APD. If an APD expires and if site construction has occurred, site remediation is required.
pkautz	Stage Tool 1) Must notify OCD Hobbs Office prior to running Stage Tool at 5753703186 2) If using Stage Tool on Surface casing, Stage Tool must be set greater than 350' from surface and a minimum of 200 feet above surface shoe. 3) When using a Stage Tool on Intermediate or Production Casing Stage must be a minimum of 50 feet below previous casing shoe.

1. Geological Formations

TVD of target 12,220
MD at TD 22,205

Pilot Hole TD N/A
Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	934	N/A	
Top Salt	1349	N/A	
Base Salt	4651	N/A	
Lamar	4892	N/A	
Bell Canyon	4929	N/A	
Cherry Canyon	6001	N/A	
Brushy Canyon	7537	N/A	
Bone Spring	9039	N/A	
Leonard Shale	9094	N/A	
Avalon shale	9356	N/A	
1st Bone Spring Sand	10036	N/A	
2nd BSPG Carb	10223	N/A	
2nd BSPG Sand	10564	N/A	
3rd BSPG Carb	11017	N/A	
3rd BSPG Sand	11682	N/A	
Top Wolfcamp	12125	N/A	
Wolfcamp Y Sand	12225	N/A	
Wolfcamp A1	12301	N/A	

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
14 3/4	0	984	984	10-3/4"	40.50	J-55	BT&C	3.51	6.95	15.78
9 7/8	0	12425	12191	7-5/8"	29.70	L-80	BT&C	2.51	1.21	1.83
6 3/4	0	11795	11795	5-1/2"	20.00	L-80	LT&C	1.15	1.20	1.89
6 3/4	11795	22204	12222	5"	18.00	P-110	BT&C	1.69	1.71	75.46
					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

Request Variance for 5-1/2" x 7-5/8" annular clearance. The portion that does not meet clearance will not be cemented

	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.	Y
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?	N

3. Cementing Program

Casing	# Sks	Wt. lb/gal	Yld ft3/sack	H2O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	332	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	156	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate Stage 1	579	10.30	3.64	22.18		Lead: Tuned Light + LCM
	198	14.80	1.36	6.57	9.5	Tail: Class C + Retarder
Intermediate Stage 2	793	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
Production	1004	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

DV tool with possible annular casing packer as needed is proposed at a depth of +/- 4,892'.

Casing String	TOC	% Excess
Surface	0	42
Intermediate Stage 1	4892	47
Intermediate Stage 2	0	40
Production	12220	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
9 7/8	**13 5/8**	**5M**	Annular	X	50% of working pressure
			Blind Ram		5M
			Pipe Ram	X	
			Double Ram	X	
			Other		
6 3/4	**13 5/8**	**10M**	Annular	X	50% of working pressure
			Blind Ram		10M
			Pipe Ram	X	
			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.

X	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 984'	FW Spud Mud	8.30 - 8.80	30-32	N/C
984' to 12425'	Brine Diesel Emulsion	8.50 - 9.00	30-35	N/C
12425' to 22204'	Oil Based Mud	12.00 - 12.50	50-70	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.

The Brine Emulsion is completely saturated brine fluid that ties diesel into itself to lower the weight of the fluid. The drilling fluid is completely salt saturated.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing	
	Will run GR/CNL fromTD 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

7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	7944 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	H2S is present
X	H2S plan is attached

8. Other Facets of Operation

9. Wellhead

A multi-bowl wellhead system will be utilized.

After running the 10-3/4" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 10000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 10000 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.

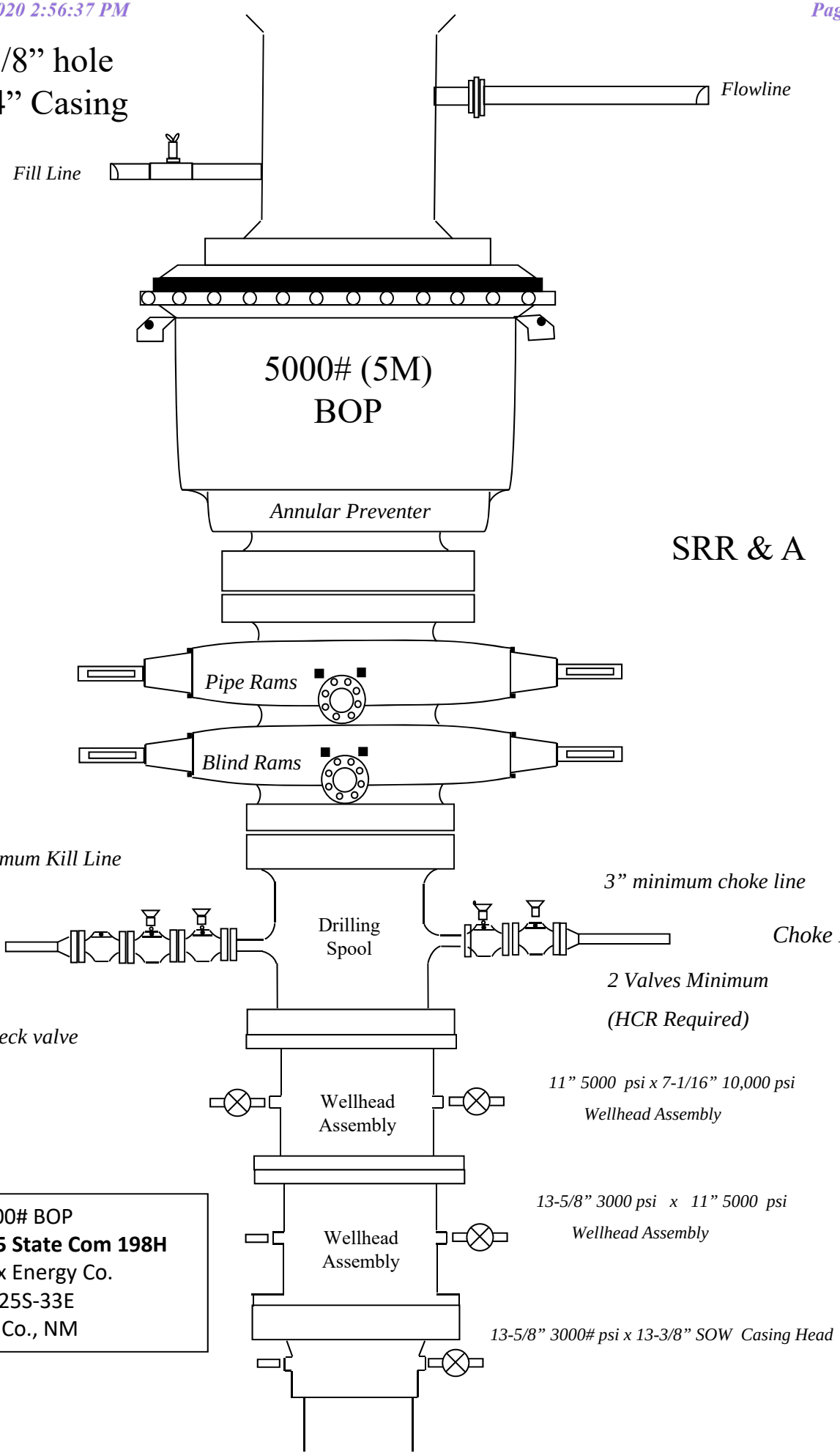
All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

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 10000 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.

Drilling 9 7/8” hole below 10 3/4” Casing



SRR & A

5000# BOP
Red Hills 32-5 State Com 198H
Cimarex Energy Co.
32-25S-33E
Lea Co., NM

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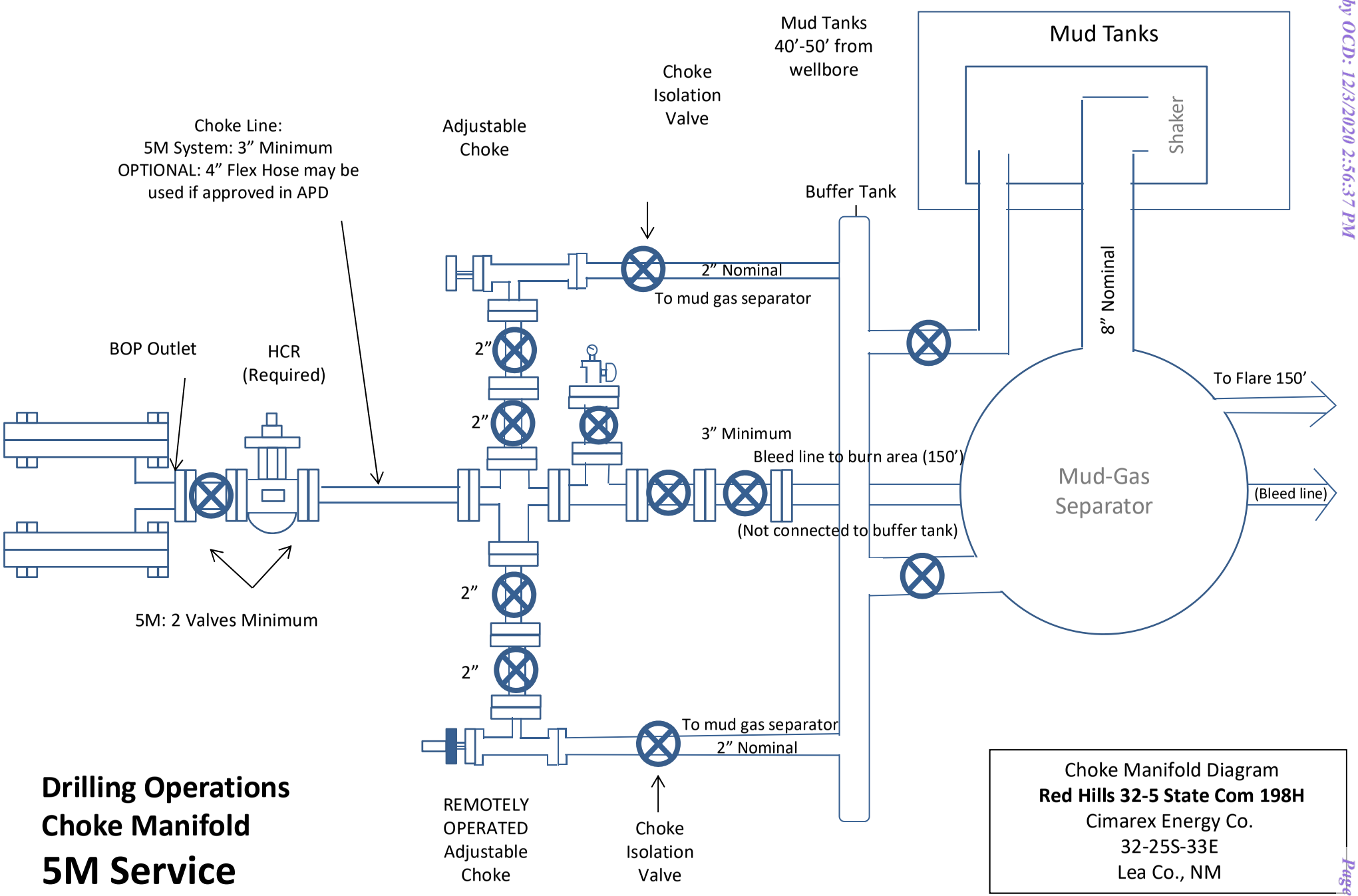
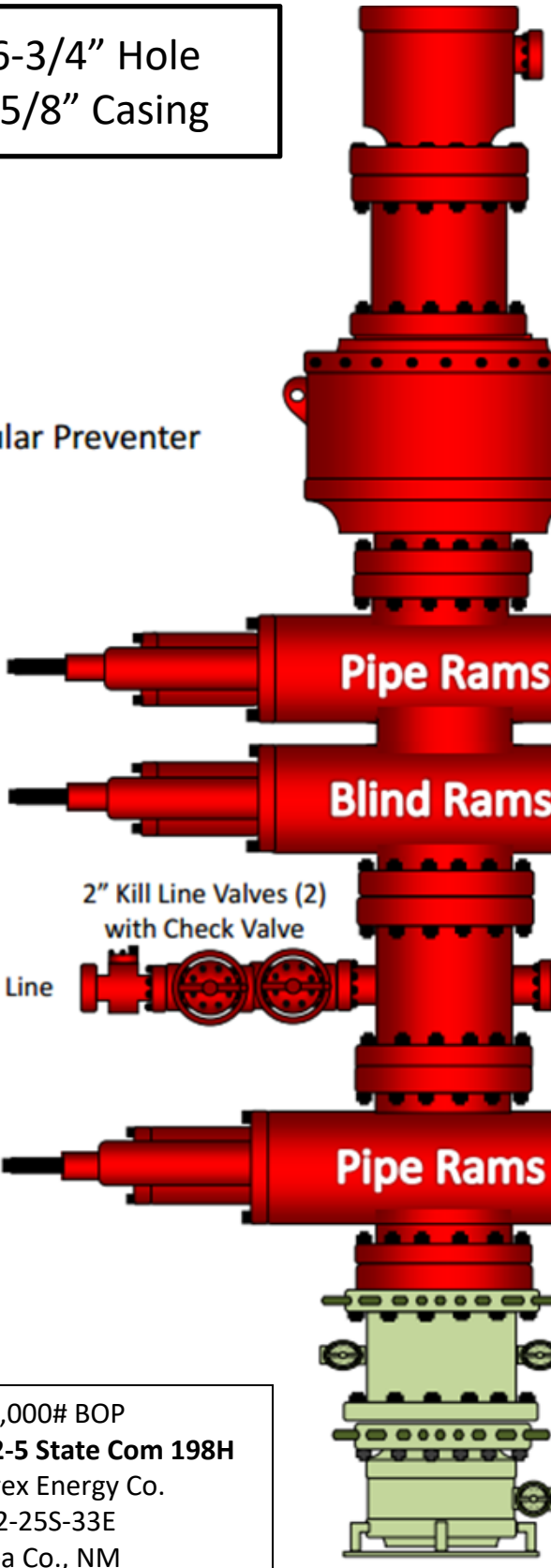


Drilling Operations
Choke Manifold
5M Service

Choke Manifold Diagram
Red Hills 32-5 State Com 198H
Cimarex Energy Co.
32-25S-33E
Lea Co., NM

Drilling 6-3/4" Hole
below 7-5/8" Casing



10,000# BOP
Red Hills 32-5 State Com 198H
Cimarex Energy Co.
32-25S-33E
Lea Co., NM

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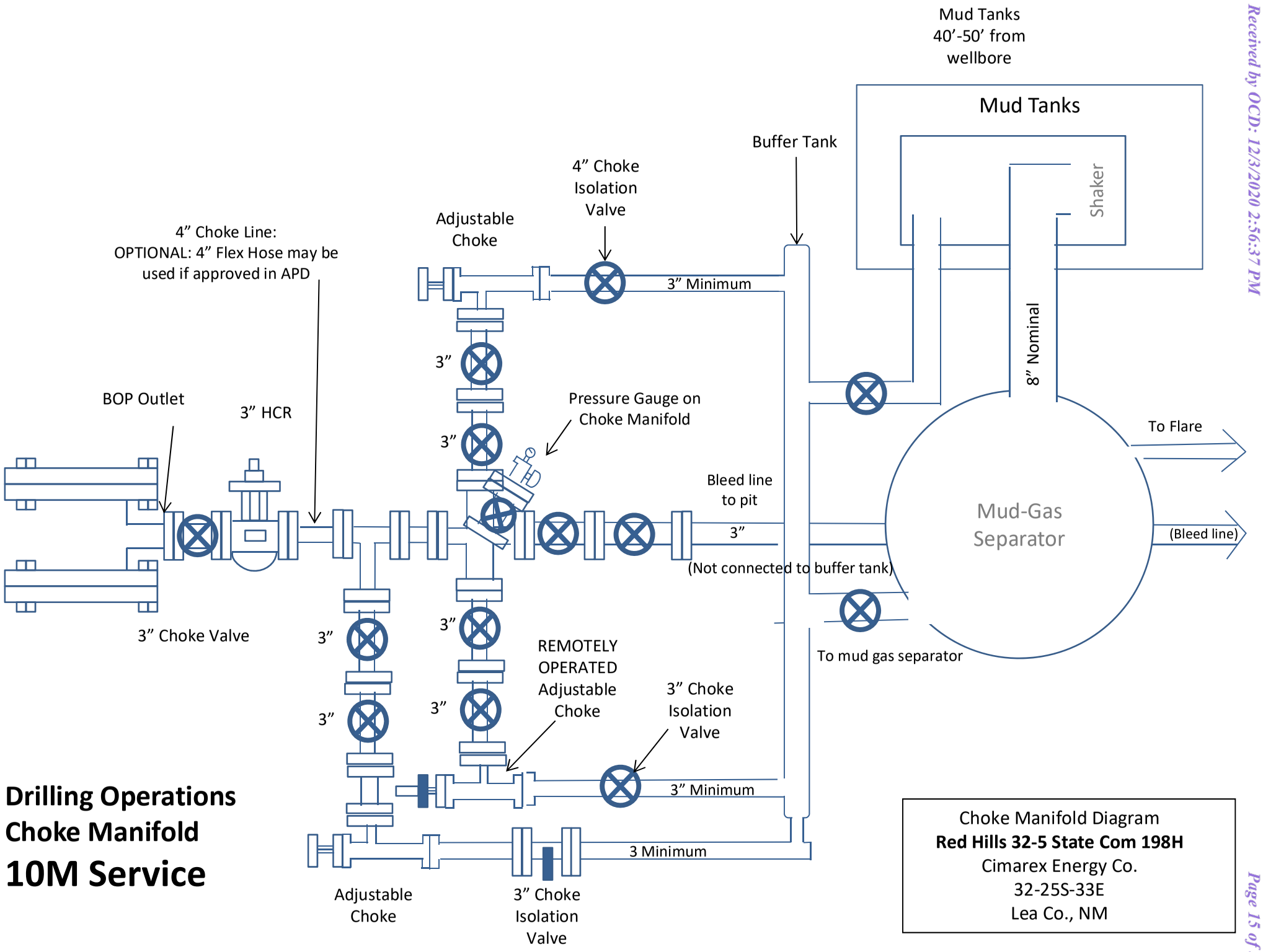

Drilling Operations
Choke Manifold
10M Service

Choke Manifold Diagram
Red Hills 32-5 State Com 198H
Cimarex Energy Co.
32-25S-33E
Lea Co., NM

Schlumberger

Cimarex Red Hills 32-5 State Com #198H Rev2 RM 11Nov20 Proposal
Geodetic Report
(Def Plan)

CIMAREX

Report Date:	November 11, 2020 - 04:09 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Cimarex Energy	**Vertical Section Azimuth:**	179.598 ° (Grid North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex Red Hills 32-5 State Com #198H / New Slot	**TVD Reference Datum:**	RKB
Well:	Red Hills 32-5 State Com #198H	**TVD Reference Elevation:**	3415.700 ft above MSL
Borehole:	Red Hills 32-5 State Com #198H	**Seabed / Ground Elevation:**	3389.700 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.481 °
Survey Name:	Cimarex Red Hills 32-5 State Com #198H Rev2 RM 11Nov20	**Total Gravity Field Strength:**	998.4314mgn (9.80665 Based)
Survey Date:	September 04, 2019	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	111.977 ° / 10900.399 ft / 6.345 / 0.891	**Total Magnetic Field Strength:**	47604.596 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.664 °
Location Lat / Long:	N 32° 5' 34.88760", W 103° 35' 13.33621"	**Declination Date:**	November 11, 2020
Location Grid N/E Y/X:	N 398378.770 ftUS, E 772449.190 ftUS	**Magnetic Declination Model:**	HDGM 2020
CRS Grid Convergence Angle:	0.3965 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99997027	**Grid Convergence Used:**	0.3965 °
Version / Patch:	2.10.821.3	**Total Corr Mag North->Grid North:**	6.0849 °
		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 [467' FNL, 390' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	100.00	0.00	280.00	100.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	200.00	0.00	280.00	200.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	300.00	0.00	280.00	300.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	400.00	0.00	280.00	400.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	500.00	0.00	280.00	500.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
Rustler	*570.00*	*0.00*	*280.00*	*570.00*	*0.00*	*0.00*	*0.00*	*0.00*	*398378.77*	*772449.19*	*N 32 5 34.89*	*W 103 35 13.34*
	600.00	0.00	280.00	600.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	700.00	0.00	280.00	700.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	800.00	0.00	280.00	800.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	900.00	0.00	280.00	900.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	1000.00	0.00	280.00	1000.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	1100.00	0.00	280.00	1100.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	1200.00	0.00	280.00	1200.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
Top of Salt	*1260.00*	*0.00*	*280.00*	*1260.00*	*0.00*	*0.00*	*0.00*	*0.00*	*398378.77*	*772449.19*	*N 32 5 34.89*	*W 103 35 13.34*
	1300.00	0.00	280.00	1300.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	1400.00	0.00	280.00	1400.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	1500.00	0.00	280.00	1500.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	1600.00	0.00	280.00	1600.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	1700.00	0.00	280.00	1700.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	1800.00	0.00	280.00	1800.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	1900.00	0.00	280.00	1900.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	2000.00	0.00	280.00	2000.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	2100.00	0.00	280.00	2100.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	2200.00	0.00	280.00	2200.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	2300.00	0.00	280.00	2300.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	2400.00	0.00	280.00	2400.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
Nudge 2°/100' DLS	2500.00	0.00	280.00	2500.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
	2600.00	2.00	280.00	2599.98	-0.32	0.30	-1.72	2.00	398379.07	772447.47	N 32 5 34.89	W 103 35 13.36
	2700.00	4.00	280.00	2699.84	-1.26	1.21	-6.87	2.00	398379.98	772442.32	N 32 5 34.90	W 103 35 13.42
	2800.00	6.00	280.00	2799.45	-2.83	2.73	-15.46	2.00	398381.50	772433.74	N 32 5 34.92	W 103 35 13.52
	2900.00	8.00	280.00	2898.70	-5.03	4.84	-27.46	2.00	398383.61	772421.73	N 32 5 34.94	W 103 35 13.65
	3000.00	10.00	280.00	2997.47	-7.86	7.56	-42.86	2.00	398386.33	772406.33	N 32 5 34.97	W 103 35 13.83
Hold Nudge	3046.39	10.93	280.00	3043.08	-9.38	9.02	-51.16	2.00	398387.79	772398.03	N 32 5 34.98	W 103 35 13.93
	3100.00	10.93	280.00	3095.72	-11.21	10.79	-61.17	0.00	398389.56	772388.02	N 32 5 35.00	W 103 35 14.05
	3200.00	10.93	280.00	3193.91	-14.64	14.08	-79.84	0.00	398392.85	772369.36	N 32 5 35.03	W 103 35 14.26
	3300.00	10.93	280.00	3292.09	-18.06	17.37	-98.51	0.00	398396.14	772350.69	N 32 5 35.07	W 103 35 14.48
	3400.00	10.93	280.00	3390.28	-21.48	20.66	-117.17	0.00	398399.43	772332.02	N 32 5 35.10	W 103 35 14.70
	3500.00	10.93	280.00	3488.47	-24.91	23.95	-135.84	0.00	398402.72	772313.35	N 32 5 35.13	W 103 35 14.91
	3600.00	10.93	280.00	3586.65	-28.33	27.24	-154.51	0.00	398406.01	772294.68	N 32 5 35.17	W 103 35 15.13
	3700.00	10.93	280.00	3684.84	-31.75	30.54	-173.18	0.00	398409.31	772276.01	N 32 5 35.20	W 103 35 15.35
	3800.00	10.93	280.00	3783.03	-35.17	33.83	-191.85	0.00	398412.60	772257.34	N 32 5 35.24	W 103 35 15.56
	3900.00	10.93	280.00	3881.21	-38.60	37.12	-210.52	0.00	398415.89	772238.68	N 32 5 35.27	W 103 35 15.78
	4000.00	10.93	280.00	3979.40	-42.02	40.41	-229.19	0.00	398419.18	772220.01	N 32 5 35.30	W 103 35 16.00
	4100.00	10.93	280.00	4077.59	-45.44	43.70	-247.86	0.00	398422.47	772201.34	N 32 5 35.34	W 103 35 16.21
	4200.00	10.93	280.00	4175.77	-48.86	47.00	-266.53	0.00	398425.76	772182.67	N 32 5 35.37	W 103 35 16.43
	4300.00	10.93	280.00	4273.96	-52.29	50.29	-285.20	0.00	398429.06	772164.00	N 32 5 35.40	W 103 35 16.65
	4400.00	10.93	280.00	4372.15	-55.71	53.58	-303.87	0.00	398432.35	772145.33	N 32 5 35.44	W 103 35 16.86
	4500.00	10.93	280.00	4470.33	-59.13	56.87	-322.54	0.00	398435.64	772126.66	N 32 5 35.47	W 103 35 17.08
	4600.00	10.93	280.00	4568.52	-62.56	60.16	-341.20	0.00	398438.93	772108.00	N 32 5 35.51	W 103 35 17.30
Base of Salt	*4685.02*	*10.93*	*280.00*	*4652.00*	*-65.47*	*62.96*	*-357.08*	*0.00*	*398441.73*	*772092.12*	*N 32 5 35.54*	*W 103 35 17.48*
	4700.00	10.93	280.00	4666.71	-65.98	63.46	-359.87	0.00	398442.22	772089.33	N 32 5 35.54	W 103 35 17.51
	4800.00	10.93	280.00	4764.89	-69.40	66.75	-378.54	0.00	398445.52	772070.66	N 32 5 35.57	W 103 35 17.73
Lamar	*4896.86*	*10.93*	*280.00*	*4860.00*	*-72.72*	*69.94*	*-396.63*	*0.00*	*398448.70*	*772052.58*	*N 32 5 35.61*	*W 103 35 17.94*
	4900.00	10.93	280.00	4863.08	-72.82	70.04	-397.21	0.00	398448.81	772051.99	N 32 5 35.61	W 103 35 17.95
Bell Canyon	*4937.60*	*10.93*	*280.00*	*4900.00*	*-74.11*	*71.28*	*-404.23*	*0.00*	*398450.04*	*772044.97*	*N 32 5 35.62*	*W 103 35 18.03*
	5000.00	10.93	280.00	4961.27	-76.25	73.33	-415.88	0.00	398452.10	772033.32	N 32 5 35.64	W 103 35 18.16
	5100.00	10.93	280.00	5059.45	-79.67	76.62	-434.55	0.00	398455.39	772014.65	N 32 5 35.68	W 103 35 18.38
	5200.00	10.93	280.00	5157.64	-83.09	79.91	-453.22	0.00	398458.68	771995.98	N 32 5 35.71	W 103 35 18.60
	5300.00	10.93	280.00	5255.83	-86.52	83.21	-471.89	0.00	398461.97	771977.32	N 32 5 35.74	W 103 35 18.81
	5400.00	10.93	280.00	5354.02	-89.94	86.50	-490.56	0.00	398465.27	771958.65	N 32 5 35.78	W 103 35 19.03
	5500.00	10.93	280.00	5452.20	-93.36	89.79	-509.23	0.00	398468.56	771939.98	N 32 5 35.81	W 103 35 19.25
	5600.00	10.93	280.00	5550.39	-96.78	93.08	-527.90	0.00	398471.85	771921.31	N 32 5 35.84	W 103 35 19.46
	5700.00	10.93	280.00	5648.58	-100.21	96.37	-546.57	0.00	398475.14	771902.64	N 32 5 35.88	W 103 35 19.68
	5800.00	10.93	280.00	5746.76	-103.63	99.67	-565.23	0.00	398478.43	771883.97	N 32 5 35.91	W 103 35 19.90
	5900.00	10.93	280.00	5844.95	-107.05	102.96	-583.90	0.00	398481.72	771865.30	N 32 5 35.95	W 103 35 20.12
	6000.00	10.93	280.00	5943.14	-110.48	106.25	-602.57	0.00	398485.02	771846.64	N 32 5 35.98	W 103 35 20.33
Cherry Canyon	*6030.42*	*10.93*	*280.00*	*5973.00*	*-111.52*	*107.25*	*-608.25*	*0.00*	*398486.02*	*771840.96*	*N 32 5 35.99*	*W 103 35 20.40*
	6100.00	10.93	280.00	6041.32	-113.90	109.54	-621.24	0.00	398488.31	771827.97	N 32 5 36.01	W 103 35 20.55
	6200.00	10.93	280.00	6139.51	-117.32	112.83	-639.91	0.00	398491.60	771809.30	N 32 5 36.05	W 103 35 20.77
	6300.00	10.93	280.00	6237.70	-120.74	116.13	-658.58	0.00	398494.89	771790.63	N 32 5 36.08	W 103 35 20.98
	6400.00	10.93	280.00	6335.88	-124.17	119.42	-677.25	0.00	398498.18	771771.96	N 32 5 36.12	W 103 35 21.20
	6500.00	10.93	280.00	6434.07	-127.59	122.71	-695.92	0.00	398501.48	771753.29	N 32 5 36.15	W 103 35 21.42
Drop to Vertical 2°/100' DLS	6567.15	10.93	280.00	6500.00	-129.89	124.92	-708.46	0.00	398503.69	771740.76	N 32 5 36.17	W 103 35 21.56
	6600.00	10.27	280.00	6532.29	-130.98	125.97	-714.41	2.00	398504.74	771734.81	N 32 5 36.18	W 103 35 21.63

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 ° ' ")
	6700.00	8.27	280.00	6630.98	-133.89	128.77	-730.27	2.00	398507.53	771718.94	N 32 5 36.21	W 103 35 21.81
	6800.00	6.27	280.00	6730.17	-136.17	130.96	-742.73	2.00	398509.73	771706.48	N 32 5 36.23	W 103 35 21.96
	6900.00	4.27	280.00	6829.74	-137.83	132.56	-751.78	2.00	398511.32	771697.43	N 32 5 36.25	W 103 35 22.06
	7000.00	2.27	280.00	6929.57	-138.86	133.55	-757.40	2.00	398512.32	771691.82	N 32 5 36.26	W 103 35 22.13
	7100.00	0.27	280.00	7029.54	-139.26	133.93	-759.58	2.00	398512.70	771689.63	N 32 5 36.26	W 103 35 22.15
Hold Vertical	7113.54	0.00	280.00	7043.08	-139.27	133.94	-759.61	2.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	7200.00	0.00	280.00	7129.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	7300.00	0.00	280.00	7229.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	7400.00	0.00	280.00	7329.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	7500.00	0.00	280.00	7429.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	7600.00	0.00	280.00	7529.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
Brushy Canyon	*7620.46*	*0.00*	*280.00*	*7550.00*	*-139.27*	*133.94*	*-759.61*	*0.00*	*398512.71*	*771689.60*	*N 32 5 36.26*	*W 103 35 22.16*
	7700.00	0.00	280.00	7629.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	7800.00	0.00	280.00	7729.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	7900.00	0.00	280.00	7829.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	8000.00	0.00	280.00	7929.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	8100.00	0.00	280.00	8029.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	8200.00	0.00	280.00	8129.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	8300.00	0.00	280.00	8229.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	8400.00	0.00	280.00	8329.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	8500.00	0.00	280.00	8429.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	8600.00	0.00	280.00	8529.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	8700.00	0.00	280.00	8629.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	8800.00	0.00	280.00	8729.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	8900.00	0.00	280.00	8829.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	9000.00	0.00	280.00	8929.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	9100.00	0.00	280.00	9029.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
Bone Spring/Bone Spring 1st/ Bond Spring Lime	*9104.46*	*0.00*	*280.00*	*9034.00*	*-139.27*	*133.94*	*-759.61*	*0.00*	*398512.71*	*771689.60*	*N 32 5 36.26*	*W 103 35 22.16*
Leonard	*9150.46*	*0.00*	*280.00*	*9080.00*	*-139.27*	*133.94*	*-759.61*	*0.00*	*398512.71*	*771689.60*	*N 32 5 36.26*	*W 103 35 22.16*
	9200.00	0.00	280.00	9129.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	9300.00	0.00	280.00	9229.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
Avalon	*9377.46*	*0.00*	*280.00*	*9307.00*	*-139.27*	*133.94*	*-759.61*	*0.00*	*398512.71*	*771689.60*	*N 32 5 36.26*	*W 103 35 22.16*
	9400.00	0.00	280.00	9329.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	9500.00	0.00	280.00	9429.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	9600.00	0.00	280.00	9529.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	9700.00	0.00	280.00	9629.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
Avalon Sand	*9747.46*	*0.00*	*280.00*	*9677.00*	*-139.27*	*133.94*	*-759.61*	*0.00*	*398512.71*	*771689.60*	*N 32 5 36.26*	*W 103 35 22.16*
	9800.00	0.00	280.00	9729.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	9900.00	0.00	280.00	9829.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	10000.00	0.00	280.00	9929.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
1st Bone Spring Sand	*10072.46*	*0.00*	*280.00*	*10002.00*	*-139.27*	*133.94*	*-759.61*	*0.00*	*398512.71*	*771689.60*	*N 32 5 36.26*	*W 103 35 22.16*
	10100.00	0.00	280.00	10029.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	10200.00	0.00	280.00	10129.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	10300.00	0.00	280.00	10229.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	10400.00	0.00	280.00	10329.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
Bone Spring 2nd/2nd Bone Spring Carb	*10428.46*	*0.00*	*280.00*	*10358.00*	*-139.27*	*133.94*	*-759.61*	*0.00*	*398512.71*	*771689.60*	*N 32 5 36.26*	*W 103 35 22.16*
	10500.00	0.00	280.00	10429.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	10600.00	0.00	280.00	10529.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
2nd Bone Spring Sand	*10606.46*	*0.00*	*280.00*	*10536.00*	*-139.27*	*133.94*	*-759.61*	*0.00*	*398512.71*	*771689.60*	*N 32 5 36.26*	*W 103 35 22.16*
	10700.00	0.00	280.00	10629.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	10800.00	0.00	280.00	10729.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	10900.00	0.00	280.00	10829.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	11000.00	0.00	280.00	10929.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
Bone Spring 3rd/3rd Bone Spring Carb	*11054.46*	*0.00*	*280.00*	*10984.00*	*-139.27*	*133.94*	*-759.61*	*0.00*	*398512.71*	*771689.60*	*N 32 5 36.26*	*W 103 35 22.16*
	11100.00	0.00	280.00	11029.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	11200.00	0.00	280.00	11129.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	11300.00	0.00	280.00	11229.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	11400.00	0.00	280.00	11329.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	11500.00	0.00	280.00	11429.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	11600.00	0.00	280.00	11529.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	11700.00	0.00	280.00	11629.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
3rd Bone Spring Sand	*11720.46*	*0.00*	*280.00*	*11650.00*	*-139.27*	*133.94*	*-759.61*	*0.00*	*398512.71*	*771689.60*	*N 32 5 36.26*	*W 103 35 22.16*
	11800.00	0.00	280.00	11729.54	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
KOP - Build 12°/100' DLS	11800.46	0.00	280.00	11730.00	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
	11900.00	11.95	179.60	11828.82	-128.93	123.60	-759.54	12.00	398502.37	771689.67	N 32 5 36.16	W 103 35 22.16
	12000.00	23.95	179.60	11923.79	-98.17	92.85	-759.33	12.00	398471.61	771689.89	N 32 5 35.86	W 103 35 22.15
	12100.00	35.95	179.60	12010.28	-48.35	43.02	-758.98	12.00	398421.79	771690.24	N 32 5 35.37	W 103 35 22.15
Wolfcamp	*12113.38*	*37.55*	*179.60*	*12021.00*	*-40.34*	*35.02*	*-758.92*	*12.00*	*398413.79*	*771690.29*	*N 32 5 35.29*	*W 103 35 22.15*
	12200.00	47.95	179.60	12084.52	18.37	-23.70	-758.51	12.00	398355.08	771690.71	N 32 5 34.70	W 103 35 22.15
Wolfcamp X Sand	*12246.60*	*53.54*	*179.60*	*12114.00*	*54.44*	*-59.77*	*-758.25*	*12.00*	*398319.01*	*771690.96*	*N 32 5 34.35*	*W 103 35 22.15*
	12300.00	59.95	179.60	12143.27	99.07	-104.39	-757.94	12.00	398274.38	771691.27	N 32 5 33.91	W 103 35 22.15
	12400.00	71.95	179.60	12183.96	190.22	-195.54	-757.30	12.00	398183.24	771691.91	N 32 5 33.00	W 103 35 22.15
Build 4°/100' DLS	12425.46	75.00	179.60	12191.20	214.62	-219.94	-757.13	12.00	398158.84	771692.08	N 32 5 32.76	W 103 35 22.15
	12500.00	77.98	179.60	12208.61	287.09	-292.41	-756.62	4.00	398086.37	771692.59	N 32 5 32.05	W 103 35 22.15
Wolfcamp Y Sand	*12549.07*	*79.94*	*179.60*	*12218.00*	*335.25*	*-340.57*	*-756.28*	*4.00*	*398038.22*	*771692.93*	*N 32 5 31.57*	*W 103 35 22.15*
	12600.00	81.98	179.60	12226.00	385.55	-390.86	-755.93	4.00	397987.92	771693.28	N 32 5 31.07	W 103 35 22.15
	12700.00	85.98	179.60	12236.48	484.98	-490.29	-755.23	4.00	397888.50	771693.98	N 32 5 30.09	W 103 35 22.15
Y Sand Target	*12797.40*	*89.88*	*179.60*	*12240.00*	*582.29*	*-587.60*	*-754.55*	*4.00*	*397791.19*	*771694.66*	*N 32 5 29.12*	*W 103 35 22.15*
	12800.00	89.98	179.60	12240.00	584.90	-590.20	-754.53	4.00	397788.58	771694.68	N 32 5 29.10	W 103 35 22.15
Y Sand Target Landing Point	12803.50	90.12	179.60	12240.00	588.40	-593.71	-754.51	4.00	397785.08	771694.71	N 32 5 29.06	W 103 35 22.15
	12900.00	90.12	179.60	12239.79	684.90	-690.20	-753.83	0.00	397688.59	771695.38	N 32 5 28.11	W 103 35 22.15
	13000.00	90.12	179.60	12239.58	784.90	-790.20	-753.13	0.00	397588.60	771696.08	N 32 5 27.12	W 103 35 22.15
	13100.00	90.12	179.60	12239.37	884.90	-890.20	-752.43	0.00	397488.60	771696.79	N 32 5 26.13	W 103 35 22.15
	13200.00	90.12	179.60	12239.16	984.90	-990.19	-751.73	0.00	397388.61	771697.49	N 32 5 25.14	W 103 35 22.15
	13300.00	90.12	179.60	12238.94	1084.90	-1090.19	-751.02	0.00	397288.61	771698.19	N 32 5 24.15	W 103 35 22.15
	13400.00	90.12	179.60	12238.73	1184.90	-1190.19	-750.32	0.00	397188.62	771698.89	N 32 5 23.16	W 103 35 22.15
	13500.00	90.12	179.60	12238.52	1284.89	-1290.19	-749.62	0.00	397088.62	771699.59	N 32 5 22.17	W 103 35 22.15
	13600.00	90.12	179.60	12238.31	1384.89	-1390.18	-748.92	0.00	396988.63	771700.29	N 32 5 21.18	W 103 35 22.15
	13700.00	90.12	179.60	12238.09	1484.89	-1490.18	-748.22	0.00	396888.64	771701.00	N 32 5 20.19	W 103 35 22.15
	13800.00	90.12	179.60	12237.88	1584.89	-1590.18	-747.52	0.00	396788.64	771701.70	N 32 5 19.20	W 103 35 22.15
	13900.00	90.12	179.60	12237.67	1684.89	-1690.18	-746.81	0.00	396688.65	771702.40	N 32 5 18.21	W 103 35 22.15
	14000.00	90.12	179.60	12237.45	1784.89	-1790.17	-746.11	0.00	396588.65	771703.10	N 32 5 17.22	W 103 35 22.15
	14100.00	90.12	179.60	12237.24	1884.89	-1890.17	-745.41	0.00	396488.66	771703.80	N 32 5 16.24	W 103 35 22.15

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 ° ' ")
	14200.00	90.12	179.60	12237.03	1984.89	-1990.17	-744.71	0.00	396388.67	771704.50	N 32 5 15.25	W 103 35 22.15
	14300.00	90.12	179.60	12236.82	2084.89	-2090.16	-744.01	0.00	396288.67	771705.21	N 32 5 14.26	W 103 35 22.15
	14400.00	90.12	179.60	12236.60	2184.89	-2190.16	-743.31	0.00	396188.68	771705.91	N 32 5 13.27	W 103 35 22.15
	14500.00	90.12	179.60	12236.39	2284.89	-2290.16	-742.60	0.00	396088.68	771706.61	N 32 5 12.28	W 103 35 22.15
	14600.00	90.12	179.60	12236.18	2384.89	-2390.16	-741.90	0.00	395988.69	771707.31	N 32 5 11.29	W 103 35 22.15
	14700.00	90.12	179.60	12235.97	2484.89	-2490.15	-741.20	0.00	395888.70	771708.01	N 32 5 10.30	W 103 35 22.15
	14800.00	90.12	179.60	12235.75	2584.89	-2590.15	-740.50	0.00	395788.70	771708.71	N 32 5 9.31	W 103 35 22.15
	14900.00	90.12	179.60	12235.54	2684.89	-2690.15	-739.80	0.00	395688.71	771709.42	N 32 5 8.32	W 103 35 22.15
	15000.00	90.12	179.60	12235.33	2784.89	-2790.15	-739.10	0.00	395588.71	771710.12	N 32 5 7.33	W 103 35 22.15
	15100.00	90.12	179.60	12235.11	2884.89	-2890.14	-738.39	0.00	395488.72	771710.82	N 32 5 6.34	W 103 35 22.15
	15200.00	90.12	179.60	12234.90	2984.89	-2990.14	-737.69	0.00	395388.72	771711.52	N 32 5 5.35	W 103 35 22.15
	15300.00	90.12	179.60	12234.69	3084.89	-3090.14	-736.99	0.00	395288.73	771712.22	N 32 5 4.36	W 103 35 22.15
	15400.00	90.12	179.60	12234.48	3184.89	-3190.14	-736.29	0.00	395188.74	771712.92	N 32 5 3.37	W 103 35 22.15
	15500.00	90.12	179.60	12234.26	3284.89	-3290.13	-735.59	0.00	395088.74	771713.63	N 32 5 2.38	W 103 35 22.15
	15600.00	90.12	179.60	12234.05	3384.89	-3390.13	-734.89	0.00	394988.75	771714.33	N 32 5 1.39	W 103 35 22.15
	15700.00	90.12	179.60	12233.84	3484.89	-3490.13	-734.18	0.00	394888.75	771715.03	N 32 5 0.40	W 103 35 22.15
	15800.00	90.12	179.60	12233.63	3584.89	-3590.12	-733.48	0.00	394788.76	771715.73	N 32 4 59.41	W 103 35 22.15
	15900.00	90.12	179.60	12233.41	3684.89	-3690.12	-732.78	0.00	394688.77	771716.43	N 32 4 58.42	W 103 35 22.15
	16000.00	90.12	179.60	12233.20	3784.89	-3790.12	-732.08	0.00	394588.77	771717.13	N 32 4 57.43	W 103 35 22.15
	16100.00	90.12	179.60	12232.99	3884.89	-3890.12	-731.38	0.00	394488.78	771717.84	N 32 4 56.44	W 103 35 22.15
	16200.00	90.12	179.60	12232.77	3984.89	-3990.11	-730.68	0.00	394388.78	771718.54	N 32 4 55.45	W 103 35 22.15
	16300.00	90.12	179.60	12232.56	4084.89	-4090.11	-729.97	0.00	394288.79	771719.24	N 32 4 54.47	W 103 35 22.15
	16400.00	90.12	179.60	12232.35	4184.89	-4190.11	-729.27	0.00	394188.79	771719.94	N 32 4 53.48	W 103 35 22.15
	16500.00	90.12	179.60	12232.14	4284.89	-4290.11	-728.57	0.00	394088.80	771720.64	N 32 4 52.49	W 103 35 22.15
	16600.00	90.12	179.60	12231.92	4384.89	-4390.10	-727.87	0.00	393988.81	771721.34	N 32 4 51.50	W 103 35 22.15
	16700.00	90.12	179.60	12231.71	4484.89	-4490.10	-727.17	0.00	393888.81	771722.05	N 32 4 50.51	W 103 35 22.15
	16800.00	90.12	179.60	12231.50	4584.89	-4590.10	-726.47	0.00	393788.82	771722.75	N 32 4 49.52	W 103 35 22.15
	16900.00	90.12	179.60	12231.29	4684.89	-4690.09	-725.76	0.00	393688.82	771723.45	N 32 4 48.53	W 103 35 22.15
	17000.00	90.12	179.60	12231.07	4784.89	-4790.09	-725.06	0.00	393588.83	771724.15	N 32 4 47.54	W 103 35 22.15
Private Leaseline Crossing	*17027.30*	*90.12*	*179.60*	*12231.01*	*4812.19*	*-4817.39*	*-724.87*	*0.00*	*393561.53*	*771724.34*	*N 32 4 47.27*	*W 103 35 22.15*
	17100.00	90.12	179.60	12230.86	4884.89	-4890.09	-724.36	0.00	393488.84	771724.85	N 32 4 46.55	W 103 35 22.15
	17200.00	90.12	179.60	12230.65	4984.89	-4990.09	-723.66	0.00	393388.84	771725.55	N 32 4 45.56	W 103 35 22.15
	17300.00	90.12	179.60	12230.43	5084.89	-5090.08	-722.96	0.00	393288.85	771726.25	N 32 4 44.57	W 103 35 22.15
	17400.00	90.12	179.60	12230.22	5184.89	-5190.08	-722.26	0.00	393188.85	771726.96	N 32 4 43.58	W 103 35 22.15
	17500.00	90.12	179.60	12230.01	5284.89	-5290.08	-721.55	0.00	393088.86	771727.66	N 32 4 42.59	W 103 35 22.15
	17600.00	90.12	179.60	12229.80	5384.89	-5390.08	-720.85	0.00	392988.87	771728.36	N 32 4 41.60	W 103 35 22.15
	17700.00	90.12	179.60	12229.58	5484.89	-5490.07	-720.15	0.00	392888.87	771729.06	N 32 4 40.61	W 103 35 22.15
	17800.00	90.12	179.60	12229.37	5584.89	-5590.07	-719.45	0.00	392788.88	771729.76	N 32 4 39.62	W 103 35 22.15
	17900.00	90.12	179.60	12229.16	5684.88	-5690.07	-718.75	0.00	392688.88	771730.46	N 32 4 38.63	W 103 35 22.15
	18000.00	90.12	179.60	12228.95	5784.88	-5790.07	-718.05	0.00	392588.89	771731.17	N 32 4 37.64	W 103 35 22.15
	18100.00	90.12	179.60	12228.73	5884.88	-5890.06	-717.34	0.00	392488.89	771731.87	N 32 4 36.65	W 103 35 22.15
	18200.00	90.12	179.60	12228.52	5984.88	-5990.06	-716.64	0.00	392388.90	771732.57	N 32 4 35.66	W 103 35 22.15
	18300.00	90.12	179.60	12228.31	6084.88	-6090.06	-715.94	0.00	392288.91	771733.27	N 32 4 34.67	W 103 35 22.15
	18400.00	90.12	179.60	12228.09	6184.88	-6190.05	-715.24	0.00	392188.91	771733.97	N 32 4 33.69	W 103 35 22.15
	18500.00	90.12	179.60	12227.88	6284.88	-6290.05	-714.54	0.00	392088.92	771734.67	N 32 4 32.70	W 103 35 22.15
	18600.00	90.12	179.60	12227.67	6384.88	-6390.05	-713.84	0.00	391988.92	771735.38	N 32 4 31.71	W 103 35 22.15
	18700.00	90.12	179.60	12227.46	6484.88	-6490.05	-713.13	0.00	391888.93	771736.08	N 32 4 30.72	W 103 35 22.15
	18800.00	90.12	179.60	12227.24	6584.88	-6590.04	-712.43	0.00	391788.94	771736.78	N 32 4 29.73	W 103 35 22.15
	18900.00	90.12	179.60	12227.03	6684.88	-6690.04	-711.73	0.00	391688.94	771737.48	N 32 4 28.74	W 103 35 22.15
	19000.00	90.12	179.60	12226.82	6784.88	-6790.04	-711.03	0.00	391588.95	771738.18	N 32 4 27.75	W 103 35 22.15
	19100.00	90.12	179.60	12226.61	6884.88	-6890.04	-710.33	0.00	391488.95	771738.88	N 32 4 26.76	W 103 35 22.15
	19200.00	90.12	179.60	12226.39	6984.88	-6990.03	-709.63	0.00	391388.96	771739.59	N 32 4 25.77	W 103 35 22.15
	19300.00	90.12	179.60	12226.18	7084.88	-7090.03	-708.92	0.00	391288.96	771740.29	N 32 4 24.78	W 103 35 22.14
	19400.00	90.12	179.60	12225.97	7184.88	-7190.03	-708.22	0.00	391188.97	771740.99	N 32 4 23.79	W 103 35 22.14
	19500.00	90.12	179.60	12225.75	7284.88	-7290.02	-707.52	0.00	391088.98	771741.69	N 32 4 22.80	W 103 35 22.14
	19600.00	90.12	179.60	12225.54	7384.88	-7390.02	-706.82	0.00	390988.98	771742.39	N 32 4 21.81	W 103 35 22.14
	19700.00	90.12	179.60	12225.33	7484.88	-7490.02	-706.12	0.00	390888.99	771743.09	N 32 4 20.82	W 103 35 22.14
	19800.00	90.12	179.60	12225.12	7584.88	-7590.02	-705.42	0.00	390788.99	771743.80	N 32 4 19.83	W 103 35 22.14
	19900.00	90.12	179.60	12224.90	7684.88	-7690.01	-704.71	0.00	390689.00	771744.50	N 32 4 18.84	W 103 35 22.14
	20000.00	90.12	179.60	12224.69	7784.88	-7790.01	-704.01	0.00	390589.01	771745.20	N 32 4 17.85	W 103 35 22.14
	20100.00	90.12	179.60	12224.48	7884.88	-7890.01	-703.31	0.00	390489.01	771745.90	N 32 4 16.86	W 103 35 22.14
	20200.00	90.12	179.60	12224.27	7984.88	-7990.01	-702.61	0.00	390389.02	771746.60	N 32 4 15.87	W 103 35 22.14
	20300.00	90.12	179.60	12224.05	8084.88	-8090.00	-701.91	0.00	390289.02	771747.30	N 32 4 14.88	W 103 35 22.14
	20400.00	90.12	179.60	12223.84	8184.88	-8190.00	-701.21	0.00	390189.03	771748.01	N 32 4 13.89	W 103 35 22.14
	20500.00	90.12	179.60	12223.63	8284.88	-8290.00	-700.50	0.00	390089.04	771748.71	N 32 4 12.90	W 103 35 22.14
	20600.00	90.12	179.60	12223.41	8384.88	-8390.00	-699.80	0.00	389989.04	771749.41	N 32 4 11.92	W 103 35 22.14
	20700.00	90.12	179.60	12223.20	8484.88	-8489.99	-699.10	0.00	389889.05	771750.11	N 32 4 10.93	W 103 35 22.14
	20800.00	90.12	179.60	12222.99	8584.88	-8589.99	-698.40	0.00	389789.05	771750.81	N 32 4 9.94	W 103 35 22.14
	20900.00	90.12	179.60	12222.78	8684.88	-8689.99	-697.70	0.00	389689.06	771751.51	N 32 4 8.95	W 103 35 22.14
	21000.00	90.12	179.60	12222.56	8784.88	-8789.98	-697.00	0.00	389589.06	771752.22	N 32 4 7.96	W 103 35 22.14
	21100.00	90.12	179.60	12222.35	8884.88	-8889.98	-696.29	0.00	389489.07	771752.92	N 32 4 6.97	W 103 35 22.14
	21200.00	90.12	179.60	12222.14	8984.88	-8989.98	-695.59	0.00	389389.08	771753.62	N 32 4 5.98	W 103 35 22.14
	21300.00	90.12	179.60	12221.93	9084.88	-9089.98	-694.89	0.00	389289.08	771754.32	N 32 4 4.99	W 103 35 22.14
	21400.00	90.12	179.60	12221.71	9184.88	-9189.97	-694.19	0.00	389189.09	771755.02	N 32 4 4.00	W 103 35 22.14
	21500.00	90.12	179.60	12221.50	9284.88	-9289.97	-693.49	0.00	389089.09	771755.72	N 32 4 3.01	W 103 35 22.14
	21600.00	90.12	179.60	12221.29	9384.88	-9389.97	-692.79	0.00	388989.10	771756.43	N 32 4 2.02	W 103 35 22.14
	21700.00	90.12	179.60	12221.07	9484.88	-9489.97	-692.08	0.00	388889.11	771757.13	N 32 4 1.03	W 103 35 22.14
	21800.00	90.12	179.60	12220.86	9584.88	-9589.96	-691.38	0.00	388789.11	771757.83	N 32 4 0.04	W 103 35 22.14
	21900.00	90.12	179.60	12220.65	9684.88	-9689.96	-690.68	0.00	388689.12	771758.53	N 32 3 59.05	W 103 35 22.14
	22000.00	90.12	179.60	12220.44	9784.88	-9789.96	-689.98	0.00	388589.12	771759.23	N 32 3 58.06	W 103 35 22.14
	22100.00	90.12	179.60	12220.22	9884.88	-9889.95	-689.28	0.00	388489.13	771759.93	N 32 3 57.07	W 103 35 22.14
	22200.00	90.12	179.60	12220.01	9984.88	-9989.95	-688.58	0.00	388389.13	771760.64	N 32 3 56.08	W 103 35 22.14
Cimarex Red Hills 32-5 State Com #198H - PBHL [100' FSL, 1149' FEL]	22204.93	90.12	179.60	12220.00	9989.80	-9994.88	-688.54	0.00	388384.21	771760.67	N 32 3 56.03	W 103 35 22.14

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	26.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Red Hills 32-5 State Com #198H / Cimarex Red Hills 32-5 State Com #198H Rev2 RM 11Nov20
	1	26.000	22204.925	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Red Hills 32-5 State Com #198H / Cimarex Red Hills 32-5 State Com

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Cimarex Red Hills 32-5 State Com #198H Rev2 RM 11Nov20 Proposal
Geodetic Report
(Def Plan)

CIMAREX

Report Date:	November 11, 2020 - 04:09 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Cimarex Energy	**Vertical Section Azimuth:**	179.598 ° (Grid North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex Red Hills 32-5 State Com #198H / New Slot	**TVD Reference Datum:**	RKB
Well:	Red Hills 32-5 State Com #198H	**TVD Reference Elevation:**	3415.700 ft above MSL
Borehole:	Red Hills 32-5 State Com #198H	**Seabed / Ground Elevation:**	3389.700 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.481 °
Survey Name:	Cimarex Red Hills 32-5 State Com #198H Rev2 RM 11Nov20	**Total Gravity Field Strength:**	998.4314mgn (9.80665 Based)
Survey Date:	September 04, 2019	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	111.977 ° / 10900.399 ft / 6.345 / 0.891	**Total Magnetic Field Strength:**	47604.596 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.664 °
Location Lat / Long:	N 32° 5' 34.88760", W 103° 35' 13.33621"	**Declination Date:**	November 11, 2020
Location Grid N/E Y/X:	N 398378.770 ftUS, E 772449.190 ftUS	**Magnetic Declination Model:**	HDGM 2020
CRS Grid Convergence Angle:	0.3965 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99997027	**Grid Convergence Used:**	0.3965 °
Version / Patch:	2.10.821.3	**Total Corr Mag North->Grid North:**	6.0849 °
		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 [467' FNL, 390' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
Nudge 2°/100' DLS	2500.00	0.00	280.00	2500.00	0.00	0.00	0.00	0.00	398378.77	772449.19	N 32 5 34.89	W 103 35 13.34
Hold Nudge	3046.39	10.93	280.00	3043.08	-9.38	9.02	-51.16	2.00	398387.79	772398.03	N 32 5 34.98	W 103 35 13.93
Drop to Vertical 2°/100' DLS	6567.15	10.93	280.00	6500.00	-129.89	124.92	-708.46	0.00	398503.69	771740.76	N 32 5 36.17	W 103 35 21.56
Hold Vertical	7113.54	0.00	280.00	7043.08	-139.27	133.94	-759.61	2.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
KOP - Build 12°/100' DLS	11800.46	0.00	280.00	11730.00	-139.27	133.94	-759.61	0.00	398512.71	771689.60	N 32 5 36.26	W 103 35 22.16
Build 4°/100' DLS	12425.46	75.00	179.60	12191.20	214.62	-219.94	-757.13	12.00	398158.84	771692.08	N 32 5 32.76	W 103 35 22.15
Landing Point	12803.50	90.12	179.60	12240.00	588.40	-593.71	-754.51	4.00	397785.08	771694.71	N 32 5 29.06	W 103 35 22.15
Cimarex Red Hills 32-5 State Com #198H - PBHL [100' FSL, 1149' FEL]	22204.93	90.12	179.60	12220.00	9989.80	-9994.88	-688.54	0.00	388384.21	771760.67	N 32 3 56.03	W 103 35 22.14

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	26.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Red Hills 32-5 State Com #198H / Cimarex Red Hills 32-5 State Com #198H Rev2 RM 11Nov20
	1	26.000	22204.925	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Red Hills 32-5 State Com #198H / Cimarex Red Hills 32-5 State Com

Received by OCD: 12/3/2020 2:56:37 PM

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Cimarex Energy

Rev 2

CIMAREX

Borehole:	Well:	Field:	Structure:
Red Hills 32-5 State Com #198H	Red Hills 32-5 State Com #198H	NM Lea County (NAD 83)	Cimarex Red Hills 32-5 State Com #198H

Gravity & Magnetic Parameters						Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet					Miscellaneous			
Model:	HDGM 2020	Dip:	59.664°	Date:	11-Nov-2020	Lat:	N 32 5 34.89	Northing:	398378.77ftUS	Grid Conv:	0.3965°	Slot:	New Slot	TVD Ref:	RKB(3415.7ft above MSL)
MagDec:	6.481°	FS:	47604.596nT	Gravity FS:	998.431mgn (9.80665 Based)	Lon:	W 103 35 13.34	Easting:	772449.19ftUS	Scale Fact:	0.99997027	Plan:	Cimarex Red Hills 32-5 State Com #198H Rev2 RM 11Nov20		

Critical Points

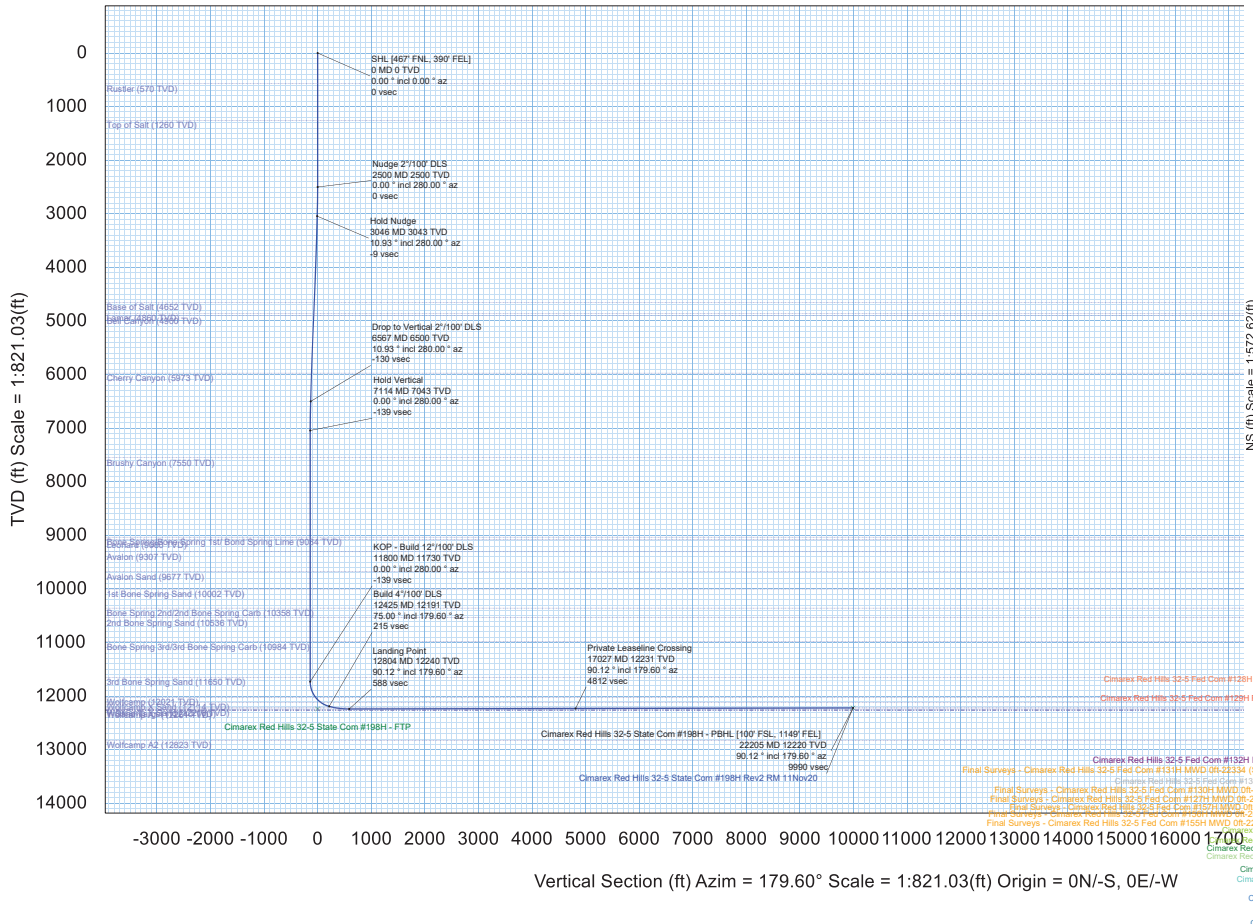
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [467' FNL, 390' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rustler	570.00	0.00	280.00	570.00	0.00	0.00	0.00	0.00
Top of Salt	1260.00	0.00	280.00	1260.00	0.00	0.00	0.00	0.00
Nudge 2°/100' DLS	2500.00	0.00	280.00	2500.00	0.00	0.00	0.00	0.00
Hold Nudge	3046.39	10.93	280.00	3043.08	-9.38	9.02	-51.16	2.00
Base of Salt	4685.02	10.93	280.00	4652.00	-65.47	62.96	-357.08	0.00
Lamar	4896.86	10.93	280.00	4860.00	-72.72	69.94	-396.63	0.00
Bell Canyon	4937.60	10.93	280.00	4900.00	-74.11	71.28	-404.23	0.00
Cherry Canyon	6030.42	10.93	280.00	5973.00	-111.52	107.25	-608.25	0.00
Drop to Vertical 2°/100' DLS	6567.15	10.93	280.00	6500.00	-129.89	124.92	-708.46	0.00
Hold Vertical	7113.54	0.00	280.00	7043.08	-139.27	133.94	-759.61	2.00
Brushy Canyon	7620.46	0.00	280.00	7550.00	-139.27	133.94	-759.61	0.00
Bone Spring/Bone Spring 1st/ Bond Spring Lime	9104.46	0.00	280.00	9034.00	-139.27	133.94	-759.61	0.00
Leonard	9150.46	0.00	280.00	9080.00	-139.27	133.94	-759.61	0.00
Avalon	9377.46	0.00	280.00	9307.00	-139.27	133.94	-759.61	0.00
Avalon Sand	9747.46	0.00	280.00	9677.00	-139.27	133.94	-759.61	0.00
1st Bone Spring Sand	10072.46	0.00	280.00	10002.00	-139.27	133.94	-759.61	0.00
Bone Spring 2nd/2nd Bone Spring Carb	10428.46	0.00	280.00	10358.00	-139.27	133.94	-759.61	0.00
2nd Bone Spring Sand	10606.46	0.00	280.00	10536.00	-139.27	133.94	-759.61	0.00
Bone Spring 3rd/3rd Bone Spring Carb	11054.46	0.00	280.00	10984.00	-139.27	133.94	-759.61	0.00
3rd Bone Spring Sand	11720.46	0.00	280.00	11650.00	-139.27	133.94	-759.61	0.00
KOP - Build 12°/100' DLS	11800.46	0.00	280.00	11730.00	-139.27	133.94	-759.61	0.00
Wolfcamp	12113.38	37.55	179.60	12021.00	-40.34	35.02	-758.92	12.00
Wolfcamp X Sand	12246.60	53.54	179.60	12114.00	54.44	-59.77	-758.25	12.00
Build 4°/100' DLS	12425.46	75.00	179.60	12191.20	214.62	-219.94	-757.13	12.00
Wolfcamp Y Sand	12549.07	79.94	179.60	12218.00	335.25	-340.57	-756.28	4.00
Y Sand Target	12797.40	89.88	179.60	12240.00	582.29	-587.60	-754.55	4.00
Landing Point	12803.50	90.12	179.60	12240.00	588.40	-593.71	-754.51	4.00
Y Sand Target	12803.52	90.12	179.60	12240.00	588.41	-593.72	-754.51	0.00
Private Leaseline Crossing	17027.30	90.12	179.60	12231.01	4812.19	-4817.39	-724.87	0.00
Cimarex Red Hills 32-5 State Com #198H - PBHL [100' FSL, 1149' FEL]	22204.93	90.12	179.60	12220.00	9989.80	-9994.88	-688.54	0.00
Wolfcamp A1	NaN			12261.00				
Wolfcamp A2	NaN			12823.00				

CONTROLLED

Plan ref	Cimarex Red Hills 32-5 State Com #198H Rev2 RM 11Nov20
Drawing ref	
Copy number	of 3
Date	11-Nov-2020

1	Client	
2	Client	
3	Office	
4	Office	

Copy number for



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Schlumberger CIMAREX

Cimarex Red Hills 32-5 State Com #198H Rev2 RM 11Nov20 Anti-Collision Summary Report

Analysis Date-24hr Time:	November 11, 2020 - 16:09	**Analysis Method:**	3D Least Distance
Client:	Cimarex Energy	**Reference Trajectory:**	Cimarex Red Hills 32-5 State Com #198H Rev2 RM 11Nov20 (Def Plan)
Field:	NM Lea County (NAD 83)	**Depth Interval:**	Every 10.00 Measured Depth (ft)
Structure:	Cimarex Red Hills 32-5 State Com #198H	**Rule Set:**	NAL Procedure: D&M AntiCollision Standard S002
Slot:	New Slot	**Min Pts:**	All local minima indicated.
Well:	Red Hills 32-5 State Com #198H	**Version / Patch:**	2.10.821.3
Borehole:	Red Hills 32-5 State Com #198H	**Database \ Project:**	US1153APP452.dir.slb.com\drilling-NM Lea County 2.10
Scan MD Range:	0.00ft ~ 22204.93ft		

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	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
Results highlighted: Sep-Factor separation <= 1.50 ft													
Cimarex Red Hills 32-5 Fed Com #199H Rev0 RM 04Sept19 (Non-Def Plan)													Fail Major
	20.00	16.40	18.02	3.61	N/A	MAS = 5.00 (m)	0.00	0.00	CtCt<=15m<15.00			Enter Alert	
	20.00	16.40	18.02	3.60	N/A	MAS = 5.00 (m)	26.00	26.00				WRP	
	20.00	20.05	5.98	-0.05	1.50	OSF1.50	1980.00	1980.00		OSF<1.50		Enter Minor	
	20.00	25.05	2.64	-5.05	1.17	OSF1.50	2520.00	2520.00				MinPt-CtCt	
	20.03	25.48	2.38	-5.46	1.15	OSF1.50	2630.00	2629.96				MINPT-O-EOU	
	20.03	25.49	2.38	-5.46	1.15	OSF1.50	2640.00	2639.94				MinPt-O-SF	
	20.04	25.50	2.38	-5.46	1.15	OSF1.50	2650.00	2649.93				MinPt-O-ADP	
	18.06	26.36	-0.18	-8.31	0.99	OSF1.50	3100.00	3095.72			OSF<1.00	Enter Major	
	17.28	26.77	-1.22	-9.48	0.93	OSF1.50	3190.00	3184.09				MinPt-CtCt	
	17.30	26.82	-1.24	-9.52	0.93	OSF1.50	3200.00	3193.91				MinPts	
	17.34	26.87	-1.24	-9.53	0.93	OSF1.50	3210.00	3203.73				MinPt-O-ADP	
	18.74	27.37	-0.16	-8.62	0.99	OSF1.50	3310.00	3301.91			OSF>1.00	Exit Major	
	28.51	28.64	8.75	-0.13	1.49	OSF1.50	3570.00	3557.20		OSF>1.50		Exit Minor	
	137.07	42.59	108.02	94.48	4.99	OSF1.50	5480.00	5432.56	OSF>5.00			Exit Alert	
	177.33	54.59	140.28	122.74	5.00	OSF1.50	7250.00	7179.54	OSF<5.00			Enter Alert	
	138.61	60.81	97.42	77.81	3.48	OSF1.50	8050.00	7979.54				MinPt-CtCt	
	138.65	60.95	97.36	77.70	3.48	OSF1.50	8070.00	7999.54				MinPts	
	138.74	61.00	97.41	77.73	3.48	OSF1.50	8090.00	8019.54				MinPt-O-SF	
	65.69	66.18	20.90	-0.50	1.49	OSF1.50	12270.00	12127.44		OSF<1.50		Enter Minor	
	45.46	67.66	-0.30	-22.20	0.99	OSF1.50	12360.00	12169.98			OSF<1.00	Enter Major	
	31.07	77.70	-21.39	-46.63	0.58	OSF1.50	12470.00	12202.05				MinPts	
	30.98	77.35	-21.24	-46.36	0.58	OSF1.50	12480.00	12204.31				MinPt-CtCt	
	39.32	58.32	-0.22	-19.01	0.99	OSF1.50	12660.00	12233.12			OSF>1.00	Exit Major	
	47.69	48.39	14.77	-0.70	1.48	OSF1.50	12780.00	12239.86		OSF>1.50		Exit Minor	
	55.02	55.19	17.57	-0.17	1.50	OSF1.50	13840.00	12237.80		OSF<1.50		Enter Minor	
	54.99	81.60	-0.07	-26.61	1.00	OSF1.50	14950.00	12235.43			OSF<1.00	Enter Major	
	54.80	299.86	-145.76	-245.06	0.27	OSF1.50	22200.00	12220.01				MinPt-CtCt	
	54.80	300.03	-145.87	-245.22	0.27	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills 32-5 State Com #197H Rev2 RM 11Nov20 (Def Plan)													Fail Minor
	19.99	16.25	18.70	3.74	N/A	MAS = 4.95 (m)	0.00	0.00	CtCt<=15m<15.00			Enter Alert	
	19.99	16.25	18.70	3.74	6013.21	MAS = 4.95 (m)	26.00	26.00				WRP	
	19.99	20.02	6.21	-0.03	1.50	OSF1.50	2050.00	2050.00		OSF<1.50		Enter Minor	
	19.99	24.27	3.39	-4.27	1.22	OSF1.50	2500.00	2500.00				MinPt-CtCt	
	20.01	24.34	3.35	-4.33	1.22	OSF1.50	2510.00	2510.00				MINPT-O-EOU	
	20.06	24.42	3.35	-4.36	1.22	OSF1.50	2520.00	2520.00				MinPts	
	24.97	25.42	7.59	-0.45	1.47	OSF1.50	2670.00	2669.90		OSF>1.50		Exit Minor	
	90.21	28.00	71.11	62.21	4.99	OSF1.50	3170.00	3164.45	OSF>5.00			Exit Alert	
	547.62	84.60	490.79	463.02	9.84	OSF1.50	12090.00	12002.12				MinPt-O-SF	
	545.01	83.94	488.62	461.07	9.87	OSF1.50	12170.00	12063.74				MinPt-O-ADP	
	544.95	83.87	488.61	461.08	9.88	OSF1.50	12180.00	12070.82				MINPT-O-EOU	
	544.95	83.79	488.66	461.16	9.88	OSF1.50	12190.00	12077.74				MinPt-CtCt	
	603.24	182.16	481.38	421.09	4.99	OSF1.50	17680.00	12229.63	OSF<5.00			Enter Alert	
	603.17	320.19	389.28	282.98	2.83	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills Unit #2H (Offset) Gas Inc Only 0ft-1500ft (Def Survey)													Fail Minor
	5919.60	32.81	5917.62	5886.79	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5919.50	32.81	5917.51	5886.69	531856.90	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	5919.48	32.81	5917.49	5886.67	599998.00	MAS = 10.00 (m)	26.00	26.00				WRP	
	5919.21	32.81	5912.47	5886.40	1242.74	MAS = 10.00 (m)	240.00	240.00				MinPts	
	5918.95	32.81	5899.54	5886.15	339.35	MAS = 10.00 (m)	610.00	610.00				MinPts	
	5919.13	32.81	5899.34	5886.32	332.30	MAS = 10.00 (m)	660.00	660.00				MINPT-O-EOU	
	5918.58	37.47	5892.94	5881.11	250.04	OSF1.50	790.00	790.00				MinPt-CtCt	
	5913.12	73.95	5863.16	5839.17	123.20	OSF1.50	1460.00	1460.00				MinPt-CtCt	
	5910.86	114.65	5833.77	5796.21	78.67	OSF1.50	2240.00	2240.00				MinPt-CtCt	
	5912.05	118.37	5832.48	5793.68	76.17	OSF1.50	2400.00	2400.00				MINPT-O-EOU	
	5913.78	120.44	5832.82	5793.33	74.86	OSF1.50	2490.00	2490.00				MinPt-O-ADP	
	5909.64	154.66	5805.88	5754.98	58.04	OSF1.50	3030.00	3026.98				MinPt-CtCt	
	5909.99	155.77	5805.48	5754.22	57.62	OSF1.50	3110.00	3105.54				MINPT-O-EOU	
	5910.46	156.33	5805.58	5754.13	57.42	OSF1.50	3150.00	3144.81				MinPt-O-ADP	
	5910.20	171.02	5795.53	5739.18	52.43	OSF1.50	3350.00	3341.19				MinPt-CtCt	
	5910.37	171.52	5795.36	5738.85	52.28	OSF1.50	3400.00	3390.28				MINPT-O-EOU	
	5910.53	171.71	5795.39	5738.82	52.22	OSF1.50	3420.00	3409.92				MinPt-O-ADP	
	5909.80	184.47	5786.15	5725.32	48.56	OSF1.50	3600.00	3586.65				MinPt-CtCt	
	5911.49	189.36	5784.59	5722.13	47.31	OSF1.50	3790.00	3773.21				MINPT-O-EOU	
	5911.98	207.68	5772.87	5704.30	43.10	OSF1.50	4040.00	4018.68				MinPt-CtCt	
	5912.17	208.19	5772.71	5703.97	42.99	OSF1.50	4090.00	4067.77				MINPT-O-EOU	
	5912.34	208.39	5772.75	5703.94	42.95	OSF1.50	4110.00	4087.41				MinPt-O-ADP	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	5913.12	231.25	5758.29	5681.87	38.67	OSF1.50	4480.00	4450.70				MinPt-CtCt	
	5913.38	232.04	5758.03	5681.34	38.54	OSF1.50	4540.00	4509.61				MINPT-O-EOU	
	5913.81	232.55	5758.12	5681.26	38.46	OSF1.50	4580.00	4548.88				MinPt-O-ADP	
	5916.20	247.22	5750.73	5668.98	36.17	OSF1.50	4780.00	4745.26				MinPt-CtCt	
	5916.28	247.41	5750.68	5668.87	36.15	OSF1.50	4810.00	4774.71				MINPT-O-EOU	
	5916.33	247.47	5750.69	5668.86	36.14	OSF1.50	4820.00	4784.53				MinPt-O-ADP	
	5916.90	255.53	5745.88	5661.37	34.99	OSF1.50	4940.00	4902.36				MinPt-CtCt	
	5916.98	255.72	5745.84	5661.26	34.97	OSF1.50	4970.00	4931.81				MINPT-O-EOU	
	5917.04	255.79	5745.85	5661.25	34.96	OSF1.50	4980.00	4941.63				MinPt-O-ADP	
	5916.88	266.85	5738.33	5650.04	33.50	OSF1.50	5150.00	5108.55				MinPt-CtCt	
	5916.97	267.30	5738.12	5649.68	33.44	OSF1.50	5190.00	5147.82				MINPT-O-EOU	
	5917.10	267.46	5738.14	5649.65	33.42	OSF1.50	5210.00	5167.46				MinPt-O-ADP	
	5918.27	282.09	5729.55	5636.18	31.68	OSF1.50	5440.00	5393.29				MinPt-CtCt	
	5924.08	297.51	5725.08	5626.57	30.06	OSF1.50	5860.00	5805.67				MINPT-O-EOU	
	5930.24	304.90	5726.32	5625.34	29.36	OSF1.50	6060.00	6002.05				MinPt-O-ADP	
	5939.46	365.36	5695.22	5574.09	24.51	OSF1.50	7140.00	7069.54				MinPt-CtCt	
	5945.32	383.33	5689.10	5561.99	23.38	OSF1.50	7620.00	7549.54				MINPT-O-EOU	
	5937.88	438.28	5645.03	5499.59	20.41	OSF1.50	8530.00	8459.54				MinPt-CtCt	
	5939.73	443.89	5643.14	5495.84	20.15	OSF1.50	8740.00	8669.54				MINPT-O-EOU	
	5941.94	446.52	5643.60	5495.42	20.04	OSF1.50	8840.00	8769.54				MinPt-O-ADP	
	5941.55	474.02	5624.88	5467.54	18.87	OSF1.50	9220.00	9149.54				MinPt-CtCt	
	5941.92	475.19	5624.47	5466.74	18.83	OSF1.50	9300.00	9229.54				MINPT-O-EOU	
	5942.41	475.76	5624.58	5466.65	18.81	OSF1.50	9340.00	9269.54				MinPt-O-ADP	
	5948.30	519.10	5601.57	5429.20	17.25	OSF1.50	10110.00	10039.54				MinPt-CtCt	
	5955.23	540.26	5594.40	5414.97	16.59	OSF1.50	10650.00	10579.54				MINPT-O-EOU	
	2099.73	636.99	1672.20	1462.74	4.99	OSF1.50	15970.00	12233.26	OSF<5.00			Enter Alert	
	640.76	641.65	210.06	-0.89	1.50	OSF1.50	17590.00	12229.82		OSF<1.50		Enter Minor	
	480.27	643.44	50.31	-163.17	1.12	OSF1.50	18010.00	12228.92				MinPts	
	635.21	641.34	206.99	-6.13	1.49	OSF1.50	18430.00	12228.03		OSF>1.50		Exit Minor	
	2110.96	635.64	1686.54	1475.32	4.99	OSF1.50	20070.00	12224.54	OSF>5.00			Exit Alert	
	4217.73	636.28	3792.88	3581.45	9.97	OSF1.50	22204.93	12220.00				TD	
Cimarex Red Hills 32-5 Fed Com #203H Rev0 JP 18Mar20 (Non-Def Plan)													Warning Alert
	134.14	32.81	132.16	101.34	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	134.14	32.81	132.16	101.34	37177.81	MAS = 10.00 (m)	26.00	26.00				WRP	
	134.14	32.81	121.31	101.34	12.17	MAS = 10.00 (m)	1790.00	1790.00				MinPts	
	134.16	32.81	121.22	101.36	12.06	MAS = 10.00 (m)	1810.00	1810.00				MINPT-O-EOU	
	136.74	32.81	123.28	103.93	11.74	MAS = 10.00 (m)	1930.00	1930.00				MinPt-O-SF	
	108.53	34.02	85.18	74.51	4.99	OSF1.50	4460.00	4431.06	OSF<5.00			Enter Alert	
	48.49	46.14	17.07	2.34	1.58	OSF1.50	5790.00	5736.94				MinPt-CtCt	
	48.74	46.94	16.78	1.80	1.56	OSF1.50	5860.00	5805.67				MINPT-O-EOU	
	49.12	47.40	16.86	1.72	1.56	OSF1.50	5900.00	5844.95				MinPts	
	78.60	55.79	40.75	22.81	2.14	OSF1.50	7200.00	7129.54				MinPt-CtCt	
	78.62	55.89	40.70	22.72	2.13	OSF1.50	7220.00	7149.54				MinPts	
	81.95	72.67	32.84	9.28	1.70	OSF1.50	10490.00	10419.54				MinPts	
	196.62	60.63	155.54	135.99	4.98	OSF1.50	10870.00	10799.54	OSF>5.00			Exit Alert	
	1321.82	315.58	1110.77	1006.24	6.31	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills 32-5 Fed Com #200H Rev0 JP 18Mar20 (Non-Def Plan)													Warning Alert
	84.84	32.81	82.86	52.03	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	84.84	32.81	82.86	52.03	62153.31	MAS = 10.00 (m)	26.00	26.00				WRP	
	66.88	32.81	51.86	34.07	4.98	MAS = 10.00 (m)	2330.00	2330.00	OSF<5.00			Enter Alert	
	58.81	32.81	42.50	26.00	3.97	MAS = 10.00 (m)	2710.00	2709.81				MinPts	
	58.81	32.81	42.48	26.00	3.96	MAS = 10.00 (m)	2720.00	2719.78				MINPT-O-EOU	
	58.91	32.81	42.54	26.10	3.95	MAS = 10.00 (m)	2740.00	2739.72				MinPt-O-SF	
	76.59	32.81	59.62	43.78	4.98	MAS = 10.00 (m)	2980.00	2977.76	OSF>5.00			Exit Alert	
	822.59	64.91	778.65	757.67	19.56	OSF1.50	8900.00	8829.54				MINPT-O-EOU	
	822.61	64.94	778.65	757.67	19.55	OSF1.50	8910.00	8839.54				MinPt-O-ADP	
	823.27	65.13	779.19	758.14	19.51	OSF1.50	8980.00	8909.54				MinPt-O-SF	
	3033.23	310.57	2825.52	2722.66	14.73	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills 32-5 Fed Com #169H Rev0 RM 04Sept19 (Non-Def Plan)													Warning Alert
	1856.36	32.81	1855.07	1823.55	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1856.36	32.81	1855.03	1823.55	41333.11	MAS = 10.00 (m)	26.00	26.00				WRP	
	459.26	82.54	403.21	376.73	8.61	OSF1.50	11900.00	11828.82				MinPt-O-SF	
	456.96	80.45	402.29	376.51	8.80	OSF1.50	12160.00	12056.51				MinPt-O-ADP	
	456.20	79.57	402.11	376.63	8.89	OSF1.50	12280.00	12132.89				MINPT-O-EOU	
	455.93	78.81	402.35	377.12	8.97	OSF1.50	12400.00	12183.96				MinPt-CtCt	
	456.61	139.41	362.63	317.20	4.99	OSF1.50	16300.00	12232.56	OSF<5.00			Enter Alert	
	456.61	317.56	243.86	139.04	2.16	OSF1.50	22200.00	12220.01				MinPt-CtCt	
	456.61	317.71	243.76	138.90	2.16	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills SWD #1 (Offset) Inc Only 0ft-19000ft (Def Survey)													Warning Alert
	6313.51	32.81	6311.53	6280.70	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6313.34	32.81	6311.34	6280.53	299559.45	MAS = 10.00 (m)	26.00	26.00				MinPt-O-SF	
	6313.27	32.81	6311.18	6280.46	56346.67	MAS = 10.00 (m)	60.00	60.00				MinPts	
	6315.76	92.87	6253.18	6222.88	104.19	OSF1.50	1840.00	1840.00				MinPt-CtCt	
	6332.66	169.87	6218.76	6162.80	56.56	OSF1.50	3270.00	3262.64				MINPT-O-EOU	
	6342.37	181.77	6220.53	6160.60	52.90	OSF1.50	3570.00	3557.20				MinPt-O-ADP	
	6379.56	259.22	6206.08	6120.34	37.19	OSF1.50	4750.00	4715.80				MinPt-CtCt	
	6381.02	263.86	6204.45	6117.16	36.54	OSF1.50	4930.00	4892.54				MINPT-O-EOU	
	6382.62	265.73	6204.81	6116.89	36.29	OSF1.50	5010.00	4971.09				MinPt-O-ADP	
	6443.13	309.29	6236.28	6133.84	31.44	OSF1.50	6040.00	5982.41				MINPT-O-EOU	
	6460.64	333.80	6237.45	6126.84	29.20	OSF1.50	6440.00	6375.16				MINPT-O-EOU	
	6464.28	337.71	6238.48	6126.58	28.87	OSF1.50	6530.00	6463.52				MinPt-O-ADP	
	6487.21	377.00	6235.22	6110.22	25.94	OSF1.50	7540.00	7469.54				MINPT-O-EOU	
	6482.90	435.76	6191.74	6047.14	22.41	OSF1.50	8510.00	8439.54				MinPt-CtCt	
	6481.49	518.40	6135.22	5963.08	18.82	OSF1.50	10100.00	10029.54				MinPt-CtCt	
	6489.84	543.89	6126.59	5945.95	17.96	OSF1.50	10760.00	10689.54				MINPT-O-EOU	
	6472.54	602.47	6070.23	5870.06	16.16	OSF1.50	11700.00	11629.54				MinPt-CtCt	
	2102.12	639.06	1673.17	1463.06	4.98	OSF1.50	16550.00	12232.03	OSF<5.00			Enter Alert	
	725.10	645.59	294.05	79.51	1.69	OSF1.50	18520.00	12227.84				MinPts	
	2105.19	634.96	1681.23	1470.23	4.98	OSF1.50	20500.00	12223.63	OSF>5.00			Exit Alert	
	3751.91	634.95	3327.95	3116.95	8.89	OSF1.50	22204.93	12220.00				TD	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
Cimarex Red Hills 32-5 Fed Com #170H Rev0 RM 04Sept19 (Non-Def Plan)													Warning Alert
	1876.33	32.81	1875.05	1843.52	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1876.33	32.81	1875.00	1843.52	41986.00	MAS = 10.00 (m)	26.00	26.00				WRP	
	882.79	87.40	823.70	795.40	15.55	OSF1.50	11840.00	11769.50				MinPt-O-SF	
	882.76	87.36	823.68	795.40	15.56	OSF1.50	11850.00	11779.46				MinPt-O-ADP	
	882.55	87.14	823.63	795.41	15.60	OSF1.50	11900.00	11828.82				MINPT-O-EOU	
	880.86	82.93	824.73	797.93	16.38	OSF1.50	12390.00	12180.76				MinPt-CtCt	
	881.22	266.21	702.91	615.01	5.00	OSF1.50	20670.00	12223.27	OSF<5.00			Enter Alert	
	881.23	314.09	671.00	567.14	4.23	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills Unit #1 (Offset) Gas Inc Only 0ft-21321ft (Def Survey)													Warning Alert
	4851.30	32.81	4849.32	4818.49	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4851.29	32.81	4849.31	4818.49	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
	4851.22	32.81	4847.55	4818.41	2877.74	MAS = 10.00 (m)	100.00	100.00				MinPts	
	4850.96	32.81	4835.05	4818.15	348.04	MAS = 10.00 (m)	450.00	450.00				MinPts	
	4851.07	32.81	4834.89	4818.26	341.36	MAS = 10.00 (m)	490.00	490.00				MINPT-O-EOU	
	4850.32	35.13	4826.24	4815.18	219.38	OSF1.50	690.00	690.00				MinPt-CtCt	
	4850.47	35.55	4826.11	4814.92	216.63	OSF1.50	730.00	730.00				MINPT-O-EOU	
	4850.12	42.61	4821.05	4807.51	178.99	OSF1.50	830.00	830.00				MinPt-CtCt	
	4850.66	44.25	4820.50	4806.41	172.06	OSF1.50	920.00	920.00				MINPT-O-EOU	
	4851.26	44.98	4820.61	4806.28	169.16	OSF1.50	960.00	960.00				MinPt-O-ADP	
	4850.60	57.53	4811.59	4793.07	130.92	OSF1.50	1120.00	1120.00				MinPt-CtCt	
	4851.11	58.90	4811.18	4792.21	127.78	OSF1.50	1200.00	1200.00				MINPT-O-EOU	
	4850.73	72.86	4801.50	4777.87	102.61	OSF1.50	1410.00	1410.00				MinPt-CtCt	
	4850.47	94.25	4786.98	4756.22	78.82	OSF1.50	1820.00	1820.00				MinPt-CtCt	
	4849.77	121.91	4767.84	4727.86	60.63	OSF1.50	2350.00	2350.00				MinPt-CtCt	
	4737.80	390.87	4476.53	4346.92	18.27	OSF1.50	7600.00	7529.54				MinPt-CtCt	
	4737.32	462.71	4428.17	4274.61	15.42	OSF1.50	8980.00	8909.54				MinPt-CtCt	
	4737.57	527.88	4384.97	4209.69	13.51	OSF1.50	10230.00	10159.54				MinPt-CtCt	
	4738.94	590.73	4344.44	4148.21	12.07	OSF1.50	11440.00	11369.54				MinPt-CtCt	
	2113.59	638.97	1685.41	1474.62	5.00	OSF1.50	14900.00	12235.54	OSF<5.00			Enter Alert	
	1132.11	640.30	704.25	491.81	2.66	OSF1.50	16680.00	12231.75				MinPts	
	1132.11	640.28	704.28	491.83	2.66	OSF1.50	16690.00	12231.73				MinPt-O-SF	
	2122.28	638.98	1695.63	1483.29	4.99	OSF1.50	18480.00	12227.92	OSF>5.00			Exit Alert	
	5634.92	635.99	5210.27	4998.93	13.33	OSF1.50	22204.93	12220.00				TD	
Neil H Wills Continental State #1 (Offset) Plugged Blind 0ft-5020ft (Def Survey)													Warning Alert
	2831.68	32.81	2829.70	2798.87	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2831.60	32.81	2829.61	2798.79	274780.55	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	2831.55	32.81	2829.57	2798.74	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
	2831.55	764.03	2321.54	2067.52	5.57	OSF1.50	2500.00	2500.00				MinPt-CtCt	
	2832.89	851.89	2264.30	1981.00	5.00	OSF1.50	2780.00	2779.55	OSF<5.00			Enter Alert	
	2907.04	1567.67	1861.26	1339.37	2.78	OSF1.50	5100.00	5059.45				MinPts	
	3955.88	1191.44	3160.93	2764.45	4.99	OSF1.50	7700.00	7629.54	OSF>5.00			Exit Alert	
	7328.41	316.30	7116.88	7012.11	34.96	OSF1.50	13670.00	12238.16				MinPt-O-ADP	
	7242.62	213.07	7099.91	7029.55	51.45	OSF1.50	14240.00	12236.94				MINPT-O-EOU	
	7197.02	133.29	7107.50	7063.73	82.19	OSF1.50	15050.00	12235.22				MinPt-CtCt	
	7248.05	237.89	7088.79	7010.16	46.07	OSF1.50	15910.00	12233.39				MINPT-O-EOU	
	7329.74	336.26	7104.91	6993.49	32.88	OSF1.50	16440.00	12232.26				MinPt-O-ADP	
	10108.72	1119.47	9361.74	8989.24	13.57	OSF1.50	22150.00	12220.12				MinPt-O-SF	
	10147.36	1123.72	9397.56	9023.65	13.57	OSF1.50	22204.93	12220.00				TD	
Cimarex Red Hills 32-5 Fed Com #201H Rev0 JP 18Mar20 (Non-Def Plan)													Pass
	99.99	32.81	98.01	67.18	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	99.99	32.81	98.01	67.18	55138.99	MAS = 10.00 (m)	26.00	26.00				WRP	
	99.99	32.81	84.64	67.18	7.33	MAS = 10.00 (m)	2190.00	2190.00				MinPts	
	100.14	32.81	84.42	67.33	7.14	MAS = 10.00 (m)	2250.00	2250.00				MINPT-O-EOU	
	104.94	32.81	87.89	72.14	6.83	MAS = 10.00 (m)	2470.00	2470.00				MinPt-O-SF	
	110.14	32.81	92.42	77.33	6.87	MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF	
	116.67	32.81	97.48	83.86	6.66	MAS = 10.00 (m)	2970.00	2967.89				MinPt-O-SF	
	709.61	79.31	656.08	630.30	13.73	OSF1.50	9960.00	9889.54				MinPt-O-SF	
	709.47	79.21	656.00	630.25	13.74	OSF1.50	10010.00	9939.54				MinPt-O-ADP	
	709.45	79.19	656.00	630.26	13.74	OSF1.50	10020.00	9949.54				MINPT-O-EOU	
	709.44	79.17	656.00	630.27	13.75	OSF1.50	10030.00	9959.54				MinPt-CtCt	
	2047.44	310.27	1839.93	1737.17	9.95	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills 32-5 Fed Com #202H Rev0 JP 18Mar20 (Non-Def Plan)													Pass
	116.60	32.81	114.62	83.80	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	116.60	32.81	114.62	83.80	46900.26	MAS = 10.00 (m)	26.00	26.00				WRP	
	116.60	32.81	102.51	83.80	9.46	MAS = 10.00 (m)	1990.00	1990.00				MinPts	
	116.71	32.81	102.37	83.90	9.28	MAS = 10.00 (m)	2030.00	2030.00				MINPT-O-EOU	
	122.70	32.81	107.15	89.89	8.89	MAS = 10.00 (m)	2230.00	2230.00				MinPt-O-SF	
	145.34	32.81	127.62	112.53	9.11	MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF	
	141.46	32.81	121.23	108.65	7.64	MAS = 10.00 (m)	3220.00	3213.55				MinPt-O-SF	
	135.59	32.81	115.36	102.78	7.32	MAS = 10.00 (m)	3530.00	3517.92				MinPts	
	135.65	32.81	115.32	102.84	7.28	MAS = 10.00 (m)	3550.00	3537.56				MINPT-O-EOU	
	138.18	32.81	117.25	105.38	7.19	MAS = 10.00 (m)	3670.00	3655.39				MinPt-O-SF	
	642.29	83.25	586.13	559.04	11.82	OSF1.50	10340.00	10269.54				MinPts	
	642.53	83.33	586.32	559.20	11.81	OSF1.50	10370.00	10299.54				MinPt-O-SF	
	1633.00	309.13	1426.25	1323.87	7.97	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills 32-5 Fed Com #172H R0 JP 09Mar20 (Non-Def Plan)													Pass
	1939.59	32.81	1937.62	1906.79	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1939.59	32.81	1937.57	1906.79	44044.44	MAS = 10.00 (m)	26.00	26.00				WRP	
	771.39	78.07	718.23	693.32	15.42	OSF1.50	10510.00	10439.54				MinPt-O-SF	
	756.96	77.69	704.05	679.27	15.21	OSF1.50	10820.00	10749.54				MinPts	
	757.09	77.71	704.17	679.38	15.20	OSF1.50	10840.00	10769.54				MinPt-O-SF	
	1539.31	319.45	1325.68	1219.86	7.26	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills 32-5 Fed Com #173H R0 JP 09Mar20 (Non-Def Plan)													Pass
	1959.55	32.81	1957.57	1926.74	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	1959.55	32.81	1957.52	1926.74	45415.45	MAS = 10.00 (m)	26.00	26.00				WRP	
	763.59	52.60	727.37	710.99	23.19	OSF1.50	7110.00	7039.54				MinPt-O-SF	
	763.23	71.56	714.38	691.67	16.73	OSF1.50	9920.00	9849.54				MinPt-O-SF	
	757.34	71.47	708.54	685.87	16.62	OSF1.50	10160.00	10089.54				MinPts	
	757.41	71.49	708.61	685.92	16.62	OSF1.50	10180.00	10109.54				MinPt-O-SF	
	2082.23	318.02	1869.56	1764.21	9.87	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills 32-5 Fed Com #174H R0 JP 09Mar20 (Non-Def Plan)													Pass
	1979.50	32.81	1977.52	1946.69	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1979.50	32.81	1977.48	1946.69	45878.33	MAS = 10.00 (m)	26.00	26.00				WRP	
	759.33	50.86	724.25	708.47	23.94	OSF1.50	7110.00	7039.54				MinPt-O-SF	
	759.17	68.02	712.65	691.14	17.57	OSF1.50	9620.00	9549.54				MinPt-O-SF	
	757.66	67.97	711.18	689.68	17.55	OSF1.50	9790.00	9719.54				MinPts	
	757.73	67.98	711.24	689.75	17.54	OSF1.50	9810.00	9739.54				MinPt-O-SF	
	2364.17	317.49	2151.86	2046.69	11.23	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills 32-5 Fed Com #175H R0 JP 09Mar20 (Non-Def Plan)													Pass
	1999.44	32.81	1997.46	1966.63	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1999.44	32.81	1997.42	1966.63	46341.02	MAS = 10.00 (m)	26.00	26.00				WRP	
	758.11	49.85	723.70	708.26	24.44	OSF1.50	7090.00	7019.54				MinPt-O-SF	
	758.02	61.69	715.71	696.33	19.46	OSF1.50	8880.00	8809.54				MinPt-CtCt	
	758.02	61.83	715.62	696.19	19.42	OSF1.50	8920.00	8849.54				MinPts	
	3035.54	316.69	2823.75	2718.84	14.46	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills 32-5 Fed Com #171H Rev0 RM 04Sept19 (Non-Def Plan)													Pass
	1896.32	32.81	1894.34	1863.51	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1896.32	32.81	1894.29	1863.51	42844.29	MAS = 10.00 (m)	26.00	26.00				WRP	
	1137.54	99.65	1070.13	1037.89	17.60	OSF1.50	11740.00	11669.54				MinPt-CtCt	
	1137.54	99.73	1070.08	1037.81	17.58	OSF1.50	11750.00	11679.54				MinPts	
	1138.05	99.82	1070.52	1038.23	17.57	OSF1.50	11790.00	11719.54				MinPt-O-SF	
	1306.06	312.69	1096.78	993.37	6.30	OSF1.50	22200.00	12220.01				MinPt-CtCt	
	1306.06	312.83	1096.68	993.22	6.30	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills Unit #3H (Offset) Gas Gyro & Inc 0ft-17597ft (Def Survey)													Pass
	8529.70	32.81	8528.41	8496.89	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	8529.64	32.81	8528.35	8496.83	N/A	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	8529.64	32.81	8528.35	8496.83	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
	8346.45	47.46	8314.36	8298.99	271.46	OSF1.50	6600.00	6532.29				MinPt-O-SF	
	8344.30	46.26	8313.01	8298.04	278.63	OSF1.50	6990.00	6919.58				MinPt-O-ADP	
	8344.23	46.18	8313.00	8298.06	279.13	OSF1.50	7020.00	6949.56				MINPT-O-EOU	
	8344.15	45.94	8313.08	8298.21	280.60	OSF1.50	7110.00	7039.54				MinPt-CtCt	
	8344.17	45.97	8313.08	8298.20	280.35	OSF1.50	7160.00	7089.54				MINPT-O-EOU	
	8344.19	46.00	8313.08	8298.19	280.15	OSF1.50	7190.00	7119.54				MinPt-O-ADP	
	8344.75	47.35	8312.75	8297.41	271.94	OSF1.50	7520.00	7449.54				MINPT-O-EOU	
	8344.90	47.51	8312.78	8297.38	270.94	OSF1.50	7580.00	7509.54				MinPt-O-ADP	
	8424.63	62.99	8382.21	8361.64	204.78	OSF1.50	11800.46	11730.00				MinPt-O-SF	
	8416.94	62.94	8374.54	8353.99	204.73	OSF1.50	11900.00	11828.82				MinPt-O-SF	
	8321.16	61.77	8279.55	8259.39	206.33	OSF1.50	12140.00	12041.64				MinPt-O-SF	
	1696.70	188.06	1570.57	1508.64	13.68	OSF1.50	20340.00	12223.97				MinPt-CtCt	
	1696.88	188.79	1570.35	1508.09	13.61	OSF1.50	20370.00	12223.90				MINPT-O-EOU	
	1697.05	189.02	1570.40	1508.03	13.59	OSF1.50	20380.00	12223.88				MinPt-O-ADP	
	1717.28	193.87	1587.61	1523.42	13.37	OSF1.50	20610.00	12223.39				MinPt-O-SF	
	2517.55	173.69	2401.33	2343.86	21.89	OSF1.50	22204.93	12220.00				TD	
Cimarex Red Hills 32-5 Fed Com #158H Rev2 RM 14Jan20 (Def Plan)													Pass
	2597.66	32.81	2596.38	2564.86	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2597.66	32.81	2596.33	2564.86	60235.83	MAS = 10.00 (m)	26.00	26.00				WRP	
	1810.51	96.81	1745.21	1713.70	28.69	OSF1.50	11800.46	11730.00				MinPt-CtCt	
	1810.55	96.90	1745.19	1713.64	28.66	OSF1.50	11820.00	11749.54				MinPts	
	1810.68	96.99	1745.26	1713.69	28.64	OSF1.50	11840.00	11769.50				MinPt-O-SF	
	1837.12	90.73	1775.91	1746.39	31.08	OSF1.50	12400.00	12183.96				MinPt-O-ADP	
	1836.08	89.57	1775.64	1746.51	31.48	OSF1.50	12630.00	12229.87				MinPt-O-ADP	
	1835.97	89.44	1775.62	1746.53	31.52	OSF1.50	12670.00	12234.07				MINPT-O-EOU	
	1835.84	89.13	1775.70	1746.71	31.63	OSF1.50	12790.00	12239.97				MinPt-CtCt	
	1837.38	314.57	1626.94	1522.81	8.81	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills 32-5 Fed Com #159H Rev3 RM 14Jan19 (Def Plan)													Pass
	2617.64	32.81	2616.35	2584.83	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2617.64	32.81	2616.31	2584.83	61013.71	MAS = 10.00 (m)	26.00	26.00				WRP	
	2617.64	32.81	2602.36	2584.83	186.98	MAS = 10.00 (m)	2280.00	2280.00				MinPts	
	1859.89	85.64	1802.04	1774.25	33.42	OSF1.50	10530.00	10459.54				MinPt-O-SF	
	1855.32	84.98	1797.92	1770.34	33.60	OSF1.50	10810.00	10739.54				MinPts	
	1855.40	84.99	1797.99	1770.41	33.60	OSF1.50	10830.00	10759.54				MinPt-O-SF	
	2289.08	321.32	2074.44	1967.76	10.72	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills 32-5 Fed Com #160H Rev3 RM 14Jan20 (Def Plan)													Pass
	2637.60	32.81	2636.31	2604.79	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2637.60	32.81	2636.27	2604.79	61799.45	MAS = 10.00 (m)	26.00	26.00				WRP	
	1875.20	82.73	1819.29	1792.47	34.91	OSF1.50	9890.00	9819.54				MinPt-CtCt	
	1875.21	82.91	1819.18	1792.29	34.83	OSF1.50	9950.00	9879.54				MinPts	
	2696.35	64.12	2653.18	2632.23	64.34	OSF1.50	12550.00	12218.16				MinPt-O-SF	
	2698.38	320.47	2484.31	2377.91	12.67	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills 32-5 Fed Com #161H R0 JP 09Mar20 (Non-Def Plan)													Pass
	2657.57	32.81	2655.59	2624.77	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2657.57	32.81	2655.55	2624.77	62577.36	MAS = 10.00 (m)	26.00	26.00				WRP	
	2657.57	32.81	2640.35	2624.77	174.15	MAS = 10.00 (m)	2480.00	2480.00				MinPts	
	2366.08	39.73	2338.85	2326.36	94.64	OSF1.50	4550.00	4519.43				MinPt-O-SF	
	1934.24	83.19	1877.81	1851.05	36.09	OSF1.50	10170.00	10099.54				MinPt-O-SF	
	1934.11	83.10	1877.74	1851.01	36.12	OSF1.50	10180.00	10109.54				MinPt-O-ADP	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	1902.43	82.16	1846.68	1820.28	35.97	OSF1.50	10600.00	10529.54				MinPt-CtCt	
	1902.45	82.18	1846.68	1820.26	35.96	OSF1.50	10610.00	10539.54				MinPts	
	1904.22	82.34	1848.35	1821.87	35.91	OSF1.50	10690.00	10619.54				MinPt-O-SF	
	2506.57	323.25	2290.41	2183.32	11.69	OSF1.50	22204.93	12220.00				MinPts	
Final Surveys - Cimarex Red Hills 32-5 Fed Com #155H MWD 0ft-22115ft (Surcon Corrected) (Def Survey)													Pass
	2515.22	32.81	2513.93	2482.41	N/A	MAS = 10.00 (m)	0.00	0.00				MinPts	
	2515.23	32.81	2513.91	2482.43	60835.36	MAS = 10.00 (m)	26.00	26.00				WRP	
	2515.43	32.81	2513.75	2482.62	6344.38	MAS = 10.00 (m)	130.00	130.00				MINPT-O-EOU	
	2515.63	32.81	2513.77	2482.82	3660.51	MAS = 10.00 (m)	190.00	190.00				MINPT-O-EOU	
	2516.21	32.81	2513.73	2483.40	1937.03	MAS = 10.00 (m)	340.00	340.00				MINPT-O-EOU	
	2512.21	32.81	2506.72	2479.41	581.43	MAS = 10.00 (m)	1010.00	1010.00				MINPT-O-EOU	
	2511.73	32.81	2505.67	2478.92	500.63	MAS = 10.00 (m)	1160.00	1160.00				MinPts	
	2512.13	32.81	2505.42	2479.32	443.10	MAS = 10.00 (m)	1300.00	1300.00				MINPT-O-EOU	
	2109.08	38.93	2082.63	2070.15	84.42	OSF1.50	6600.00	6532.29				MinPt-O-SF	
	2103.48	38.38	2077.40	2065.11	85.48	OSF1.50	6770.00	6700.37				MinPts	
	2103.47	38.34	2077.41	2065.13	85.56	OSF1.50	6780.00	6710.30				MinPt-CtCt	
	2179.80	51.50	2145.02	2128.30	65.15	OSF1.50	10070.00	9999.54				MinPt-CtCt	
	2178.66	53.15	2142.77	2125.50	63.04	OSF1.50	10390.00	10319.54				MinPt-CtCt	
	2172.87	56.28	2134.90	2116.59	59.31	OSF1.50	10960.00	10889.54				MinPt-CtCt	
	2172.31	57.26	2133.68	2115.04	58.25	OSF1.50	11150.00	11079.54				MinPt-CtCt	
	2172.36	57.42	2133.62	2114.93	58.09	OSF1.50	11180.00	11109.54				MINPT-O-EOU	
	2172.40	57.48	2133.63	2114.93	58.04	OSF1.50	11190.00	11119.54				MinPt-O-ADP	
	2185.92	60.16	2145.36	2125.75	55.69	OSF1.50	11710.00	11639.54				MinPt-O-SF	
	2167.67	60.51	2126.88	2107.16	54.94	OSF1.50	11900.00	11828.82				MinPt-O-SF	
	2150.13	58.21	2110.85	2091.92	56.77	OSF1.50	12400.00	12183.96				MinPts	
	2150.12	58.18	2110.86	2091.95	56.80	OSF1.50	12410.00	12186.95				MinPt-CtCt	
	2157.84	58.03	2118.70	2099.81	57.08	OSF1.50	12670.00	12234.07				MinPt-O-SF	
	2175.83	62.36	2133.82	2113.47	53.44	OSF1.50	13370.00	12238.79				MinPt-CtCt	
	2175.93	62.65	2133.73	2113.28	53.19	OSF1.50	13400.00	12238.73				MINPT-O-EOU	
	2176.12	62.88	2133.76	2113.25	53.00	OSF1.50	13420.00	12238.69				MinPt-O-ADP	
	2192.02	73.21	2142.78	2118.80	45.69	OSF1.50	14080.00	12237.28				MinPt-CtCt	
	2192.37	74.27	2142.43	2118.11	45.04	OSF1.50	14140.00	12237.16				MINPT-O-EOU	
	2192.80	74.80	2142.50	2118.00	44.72	OSF1.50	14170.00	12237.09				MinPt-O-ADP	
	2165.58	117.65	2086.70	2047.93	27.91	OSF1.50	15960.00	12233.29				MinPt-CtCt	
	2165.92	122.18	2084.02	2043.74	26.87	OSF1.50	16130.00	12232.92				MinPt-CtCt	
	2167.06	125.78	2082.76	2041.28	26.11	OSF1.50	16270.00	12232.63				MINPT-O-EOU	
	2168.14	127.04	2083.00	2041.10	25.86	OSF1.50	16320.00	12232.52				MinPt-O-ADP	
	2178.17	135.96	2087.09	2042.21	24.25	OSF1.50	16640.00	12231.84				MINPT-O-EOU	
	2178.78	136.71	2087.20	2042.07	24.12	OSF1.50	16670.00	12231.77				MinPt-O-ADP	
	2188.83	154.24	2085.57	2034.59	21.45	OSF1.50	17290.00	12230.46				MinPt-CtCt	
	2191.16	173.05	2075.36	2018.10	19.12	OSF1.50	17950.00	12229.05				MinPt-CtCt	
	2193.37	195.28	2062.75	1998.09	16.95	OSF1.50	18720.00	12227.41				MinPt-CtCt	
	2193.10	203.22	2057.19	1989.88	16.28	OSF1.50	18990.00	12226.84				MinPt-CtCt	
	2193.11	212.07	2051.29	1981.04	15.60	OSF1.50	19290.00	12226.20				MinPt-CtCt	
	2191.94	218.23	2046.02	1973.71	15.15	OSF1.50	19500.00	12225.75				MinPt-CtCt	
	2193.43	230.01	2039.65	1963.42	14.38	OSF1.50	19900.00	12224.90				MinPt-CtCt	
	2172.94	284.26	1983.00	1888.69	11.51	OSF1.50	21720.00	12221.03				MinPt-CtCt	
	2173.66	286.42	1982.27	1887.24	11.43	OSF1.50	21800.00	12220.86				MINPT-O-EOU	
	2163.00	291.10	1968.49	1871.90	11.19	OSF1.50	21950.00	12220.54				MinPt-O-SF	
	2148.58	298.68	1949.00	1849.90	10.83	OSF1.50	22200.00	12220.01				MinPt-CtCt	
	2148.58	298.80	1948.92	1849.78	10.83	OSF1.50	22204.93	12220.00				MinPts	
Final Surveys - Cimarex Red Hills 32-5 Fed Com #156H MWD 0ft-20955ft (Surcon Corrected) (Def Survey)													Pass
	2535.19	32.81	2533.91	2502.39	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2535.18	32.81	2533.85	2502.37	52486.08	MAS = 10.00 (m)	26.00	26.00				WRP	
	2534.40	32.81	2531.43	2501.59	1505.97	MAS = 10.00 (m)	430.00	430.00				MinPts	
	2535.24	32.81	2530.81	2502.43	807.67	MAS = 10.00 (m)	730.00	730.00				MINPT-O-EOU	
	2532.24	32.81	2523.03	2499.43	313.43	MAS = 10.00 (m)	1820.00	1820.00				MinPts	
	2532.36	32.81	2522.86	2499.55	302.56	MAS = 10.00 (m)	1890.00	1890.00				MINPT-O-EOU	
	2277.66	38.87	2251.28	2238.79	91.16	OSF1.50	6600.00	6532.29				MinPt-O-SF	
	2215.99	38.71	2189.68	2177.28	89.33	OSF1.50	7640.00	7569.54				MinPt-CtCt	
	2216.02	38.81	2189.64	2177.21	89.09	OSF1.50	7660.00	7589.54				MINPT-O-EOU	
	2216.05	38.86	2189.64	2177.19	88.98	OSF1.50	7670.00	7599.54				MinPt-O-ADP	
	2235.63	48.47	2202.83	2187.17	71.32	OSF1.50	9620.00	9549.54				MinPt-CtCt	
	2235.72	48.72	2202.74	2186.99	70.94	OSF1.50	9670.00	9599.54				MINPT-O-EOU	
	2235.80	48.82	2202.76	2186.98	70.79	OSF1.50	9690.00	9619.54				MinPt-O-ADP	
	2251.16	53.75	2214.85	2197.42	64.51	OSF1.50	10630.00	10559.54				MinPt-CtCt	
	2251.21	53.87	2214.82	2197.34	64.36	OSF1.50	10650.00	10579.54				MINPT-O-EOU	
	2251.26	53.93	2214.82	2197.32	64.29	OSF1.50	10660.00	10589.54				MinPt-O-ADP	
	2250.71	55.58	2213.18	2195.12	62.29	OSF1.50	10920.00	10849.54				MinPt-CtCt	
	2250.75	55.72	2213.14	2195.04	62.14	OSF1.50	10940.00	10869.54				MinPts	
	2280.88	57.52	2242.13	2223.36	60.75	OSF1.50	11320.00	11249.54				MinPt-O-SF	
	2574.29	58.89	2534.69	2515.40	66.70	OSF1.50	13040.00	12239.50				MinPt-CtCt	
	2574.89	60.18	2534.43	2514.71	65.26	OSF1.50	13150.00	12239.26				MINPT-O-EOU	
	2575.99	61.51	2534.64	2514.48	63.85	OSF1.50	13250.00	12239.05				MinPt-O-ADP	
	2575.29	73.94	2525.65	2501.34	52.95	OSF1.50	13960.00	12237.54				MinPt-CtCt	
	2572.55	91.63	2511.13	2480.92	42.57	OSF1.50	14740.00	12235.88				MinPt-CtCt	
	2572.20	98.86	2505.95	2473.34	39.42	OSF1.50	15030.00	12235.26				MinPt-CtCt	
	2558.90	131.62	2470.82	2427.28	29.38	OSF1.50	16260.00	12232.65				MinPt-CtCt	
	2560.04	135.02	2469.69	2425.02	28.65	OSF1.50	16390.00	12232.37				MINPT-O-EOU	
	2562.80	138.24	2470.30	2424.56	28.00	OSF1.50	16510.00	12232.12				MinPt-O-ADP	
	2577.41	157.10	2472.34	2420.31	24.76	OSF1.50	17170.00	12230.71				MinPt-CtCt	
	2579.06	166.86	2467.48	2412.20	23.32	OSF1.50	17520.00	12229.97				MINPT-O-EOU	
	2580.16	168.18	2467.70	2411.98	23.14	OSF1.50	17570.00	12229.86				MinPt-O-ADP	
	2586.62	174.18	2470.16	2412.44	22.40	OSF1.50	17780.00	12229.41				MinPt-O-ADP	
	2594.17	189.94	2467.20	2404.23	20.59	OSF1.50	18310.00	12228.29				MinPt-CtCt	
	2593.24	204.83	2456.35	2388.41	19.08	OSF1.50	18820.00	12227.20				MinPt-CtCt	
	2592.58	209.52	2452.56	2383.06	18.64	OSF1.50	18980.00	12226.86				MinPt-CtCt	
	2589.79	231.54	2435.09	2358.25	16.85	OSF1.50	19730.00	12225.27				MinPt-CtCt	
	2587.01	242.98	2424.68	2344.03	16.03	OSF1.50	20120.00	12224.44				MinPt-CtCt	
	2585.80	253.32	2416.58	2332.48	15.37	OSF1.50	20470.00	12223.69				MinPt-CtCt	
	2582.34	265.76	2404.82	2316.58	14.63	OSF1.50	20890.00	12222.80				MinPt-CtCt	
	2583.80	274.95	2400.15	2308.84	14.14	OSF1.50	21200.00	12222.14				MinPt-CtCt	
	2569.26	289.27	2376.07	2279.99	13.36	OSF1.50	21680.00	12221.12				MinPt-CtCt	
	2569.96	291.37	2375.37	2278.59	13.27	OSF1.50	21760.00	12220.95				MINPT-O-EOU	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	2570.60	292.14	2375.50	2278.46	13.24	OSF1.50	21790.00	12220.88				MinPt-O-ADP	
	2586.91	304.92	2383.29	2281.99	12.76	OSF1.50	22204.93	12220.00				MinPts	
Final Surveys - Cimarex Red Hills 32-5 Fed Com #157H MWD 0ft-20220ft (Surcon Corrected) (Def Survey)													Pass
	2555.17	32.81	2553.88	2522.36	891735.27	MAS = 10.00 (m)	0.00	0.00				Surface	
	2555.11	32.81	2553.75	2522.30	36534.47	MAS = 10.00 (m)	26.00	26.00				WRP	
	2552.98	32.81	2550.53	2520.17	2185.29	MAS = 10.00 (m)	310.00	310.00				MinPts	
	2553.05	32.81	2550.44	2520.24	1922.31	MAS = 10.00 (m)	350.00	350.00				MINPT-O-EOU	
	2651.02	32.81	2638.54	2618.21	233.48	MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF	
	2303.97	39.25	2277.32	2264.72	91.38	OSF1.50	6600.00	6532.29				MinPt-O-SF	
	2259.61	37.42	2234.16	2222.20	94.39	OSF1.50	7110.00	7039.54				MinPts	
	2237.76	46.66	2206.13	2191.10	74.41	OSF1.50	9270.00	9199.54				MinPt-CtCt	
	2236.57	48.22	2203.90	2188.35	71.89	OSF1.50	9580.00	9509.54				MinPt-CtCt	
	2236.61	48.37	2203.84	2188.24	71.65	OSF1.50	9610.00	9539.54				MINPT-O-EOU	
	2236.70	48.48	2203.85	2188.22	71.49	OSF1.50	9630.00	9559.54				MinPt-O-ADP	
	2241.19	50.97	2206.69	2190.23	68.00	OSF1.50	10100.00	10029.54				MinPt-CtCt	
	2241.23	51.09	2206.65	2190.14	67.83	OSF1.50	10120.00	10049.54				MinPts	
	2281.90	54.13	2245.37	2227.77	64.77	OSF1.50	10710.00	10639.54				MinPt-O-SF	
	2923.44	54.85	2886.53	2868.59	81.44	OSF1.50	12980.00	12239.62				MinPt-CtCt	
	2923.83	56.13	2886.07	2867.70	79.56	OSF1.50	13080.00	12239.41				MINPT-O-EOU	
	2920.33	62.40	2878.39	2857.94	71.34	OSF1.50	13470.00	12238.58				MinPt-CtCt	
	2920.87	63.98	2877.87	2856.89	69.56	OSF1.50	13560.00	12238.39				MINPT-O-EOU	
	2921.62	64.88	2878.02	2856.73	68.60	OSF1.50	13610.00	12238.28				MinPt-O-ADP	
	2909.52	79.39	2856.26	2830.13	55.67	OSF1.50	14270.00	12236.88				MinPt-CtCt	
	2909.98	80.63	2855.89	2829.35	54.81	OSF1.50	14330.00	12236.75				MINPT-O-EOU	
	2910.33	81.05	2855.96	2829.28	54.53	OSF1.50	14350.00	12236.71				MinPt-O-ADP	
	2931.18	91.42	2869.89	2839.76	48.62	OSF1.50	14770.00	12235.82				MINPT-O-EOU	
	2931.58	91.87	2869.99	2839.71	48.39	OSF1.50	14790.00	12235.77				MinPt-O-ADP	
	2927.82	114.46	2851.18	2813.36	38.70	OSF1.50	15630.00	12233.99				MinPt-CtCt	
	2927.24	121.78	2845.72	2805.47	36.35	OSF1.50	15900.00	12233.41				MinPt-CtCt	
	2927.77	124.00	2844.76	2803.77	35.70	OSF1.50	15990.00	12233.22				MINPT-O-EOU	
	2928.56	124.95	2844.92	2803.61	35.43	OSF1.50	16030.00	12233.14				MinPt-O-ADP	
	2941.12	133.77	2851.60	2807.35	33.22	OSF1.50	16330.00	12232.50				MinPt-CtCt	
	2941.93	136.29	2850.73	2805.64	32.61	OSF1.50	16430.00	12232.29				MINPT-O-EOU	
	2943.24	142.55	2847.87	2800.70	31.18	OSF1.50	16640.00	12231.84				MinPt-CtCt	
	2944.42	145.64	2846.98	2798.78	30.53	OSF1.50	16760.00	12231.58				MINPT-O-EOU	
	2946.75	153.06	2844.37	2793.69	29.06	OSF1.50	17010.00	12231.05				MinPt-CtCt	
	2948.50	157.33	2843.28	2791.17	28.28	OSF1.50	17170.00	12230.71				MINPT-O-EOU	
	2951.68	161.19	2843.88	2790.49	27.63	OSF1.50	17310.00	12230.41				MinPt-O-ADP	
	2955.25	169.76	2841.74	2785.49	26.26	OSF1.50	17600.00	12229.80				MINPT-O-EOU	
	2956.08	170.75	2841.90	2785.33	26.12	OSF1.50	17640.00	12229.71				MinPt-O-ADP	
	2964.33	176.38	2846.41	2787.95	25.35	OSF1.50	17830.00	12229.31				MINPT-O-EOU	
	2966.44	178.84	2846.87	2787.59	25.01	OSF1.50	17920.00	12229.12				MinPt-O-ADP	
	2932.09	231.00	2777.75	2701.09	19.12	OSF1.50	19680.00	12225.37				MinPt-CtCt	
	2926.30	250.50	2758.95	2675.79	17.59	OSF1.50	20340.00	12223.97				MinPt-CtCt	
	2927.14	253.11	2758.06	2674.03	17.41	OSF1.50	20440.00	12223.75				MINPT-O-EOU	
	2931.27	261.34	2756.71	2669.93	16.88	OSF1.50	20720.00	12223.16				MINPT-O-EOU	
	2937.22	274.68	2753.75	2662.53	16.09	OSF1.50	21170.00	12222.20				MINPT-O-EOU	
	2939.31	277.13	2754.21	2662.17	15.96	OSF1.50	21260.00	12222.01				MinPt-O-ADP	
	2933.42	305.97	2729.10	2627.45	14.42	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills Unit #4 (Offset) Gas Gyro to 12499 Blind to 17675ft (Def Survey)													Pass
	5493.46	32.81	5491.48	5460.65	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5493.41	32.81	5491.43	5460.61	923907.37	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	5493.38	32.81	5491.40	5460.57	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
	5493.38	32.81	5491.39	5460.57	593642.05	MAS = 10.00 (m)	30.00	30.00				MinPts	
	5220.09	40.68	5192.23	5179.41	203.56	OSF1.50	6600.00	6532.29				MinPt-O-SF	
	5210.46	39.48	5183.39	5170.97	209.74	OSF1.50	6960.00	6889.62				MinPt-O-ADP	
	5210.40	39.41	5183.37	5170.98	210.13	OSF1.50	6980.00	6909.59				MINPT-O-EOU	
	5210.38	39.38	5183.38	5171.00	210.29	OSF1.50	6990.00	6919.58				MinPt-CtCt	
	5233.77	52.39	5198.08	5181.38	156.63	OSF1.50	9660.00	9589.54				MinPt-CtCt	
	5234.96	58.20	5195.41	5176.76	140.28	OSF1.50	10700.00	10629.54				MINPT-O-EOU	
	5235.51	59.05	5195.40	5176.46	138.17	OSF1.50	10820.00	10749.54				MINPT-O-EOU	
	5236.47	60.20	5195.61	5176.28	135.38	OSF1.50	10980.00	10909.54				MinPt-O-ADP	
	5242.95	65.37	5198.60	5177.57	124.61	OSF1.50	11710.00	11639.54				MinPt-CtCt	
	5242.99	65.51	5198.57	5177.48	124.28	OSF1.50	11740.00	11669.54				MINPT-O-EOU	
	5243.06	65.59	5198.59	5177.47	124.06	OSF1.50	11760.00	11689.54				MinPt-O-ADP	
	5235.39	65.96	5190.66	5169.43	123.25	OSF1.50	11900.00	11828.82				MinPt-O-SF	
	2678.23	110.30	2603.83	2567.93	37.26	OSF1.50	16590.00	12231.94				MinPt-CtCt	
	2678.43	110.94	2603.63	2567.49	37.02	OSF1.50	16620.00	12231.88				MINPT-O-EOU	
	2678.74	111.36	2603.69	2567.39	36.86	OSF1.50	16640.00	12231.84				MinPt-O-ADP	
	2816.84	126.47	2731.87	2690.38	33.92	OSF1.50	17460.00	12230.09				MinPt-O-SF	
	6223.40	126.47	6138.43	6096.93	74.96	OSF1.50	22204.93	12220.00				TD	
Final Surveys - Cimarex Red Hills 32-5 Fed Com #127H MWD 0ft-22412ft (Surcon Corrected) (Def Survey)													Pass
	4389.43	32.81	4388.14	4356.62	N/A	MAS = 10.00 (m)	0.00	0.00				MinPts	
	4389.45	32.81	4388.16	4356.64	534191.46	MAS = 10.00 (m)	26.00	26.00				WRP	
	4389.52	32.81	4388.14	4356.72	43623.97	MAS = 10.00 (m)	60.00	60.00				MINPT-O-EOU	
	4386.34	32.81	4381.03	4353.53	1060.92	MAS = 10.00 (m)	990.00	990.00				MINPT-O-EOU	
	4384.90	32.81	4377.78	4352.10	721.96	MAS = 10.00 (m)	1420.00	1420.00				MinPts	
	3031.17	40.38	3003.35	2990.79	120.58	OSF1.50	6800.00	6730.17				MinPt-O-SF	
	2743.42	56.58	2704.57	2686.84	77.26	OSF1.50	10290.00	10219.54				MinPt-CtCt	
	2743.48	56.76	2704.52	2686.73	77.01	OSF1.50	10320.00	10249.54				MINPT-O-EOU	
	2743.54	56.81	2704.53	2686.72	76.93	OSF1.50	10330.00	10259.54				MinPt-O-ADP	
	2778.76	63.71	2735.19	2715.05	68.89	OSF1.50	11680.00	11609.54				MinPt-CtCt	
	2778.86	64.02	2735.08	2714.84	68.55	OSF1.50	11730.00	11659.54				MINPT-O-EOU	
	2778.95	64.14	2735.10	2714.81	68.41	OSF1.50	11750.00	11679.54				MinPt-O-ADP	
	2780.36	64.48	2736.28	2715.88	68.07	OSF1.50	11900.00	11828.82				MinPt-O-SF	
	2744.51	61.83	2702.21	2682.68	70.17	OSF1.50	12880.00	12239.84				MinPt-CtCt	
	2744.53	61.88	2702.20	2682.65	70.11	OSF1.50	12900.00	12239.79				MINPT-O-EOU	
	2744.56	61.92	2702.20	2682.64	70.06	OSF1.50	12910.00	12239.77				MinPt-O-ADP	
	2728.77	71.26	2680.17	2657.51	60.12	OSF1.50	13800.00	12237.88				MinPt-CtCt	
	2729.23	72.33	2679.92	2656.90	59.20	OSF1.50	13880.00	12237.71				MINPT-O-EOU	
	2730.36	73.80	2680.07	2656.56	57.99	OSF1.50	13970.00	12237.52				MinPt-O-ADP	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	2735.20	77.28	2682.59	2657.92	55.36	OSF1.50	14170.00	12237.09				MinPt-O-ADP	
	2741.67	83.08	2685.20	2658.58	51.45	OSF1.50	14460.00	12236.48				MinPt-O-ADP	
	2743.96	98.67	2677.10	2645.28	43.08	OSF1.50	15120.00	12235.07				MinPt-CtCt	
	2743.73	106.28	2671.80	2637.45	39.89	OSF1.50	15430.00	12234.41				MinPt-CtCt	
	2743.15	112.07	2667.36	2631.08	37.76	OSF1.50	15660.00	12233.92				MinPt-CtCt	
	2743.89	114.51	2666.47	2629.38	36.95	OSF1.50	15770.00	12233.69				MINPT-O-EOU	
	2744.78	115.59	2666.64	2629.19	36.60	OSF1.50	15820.00	12233.58				MinPt-O-ADP	
	2772.01	128.04	2685.58	2643.97	33.27	OSF1.50	16310.00	12232.54				MinPt-O-ADP	
	2779.21	135.08	2688.09	2644.13	31.57	OSF1.50	16550.00	12232.03				MINPT-O-EOU	
	2732.33	165.47	2620.93	2566.86	25.24	OSF1.50	17620.00	12229.75				MinPt-CtCt	
	2737.07	180.98	2615.34	2556.10	23.07	OSF1.50	18180.00	12228.56				MINPT-O-EOU	
	2738.53	182.74	2615.62	2555.80	22.86	OSF1.50	18250.00	12228.41				MinPt-O-ADP	
	2728.90	224.39	2578.21	2504.51	18.49	OSF1.50	19660.00	12225.41				MinPt-CtCt	
	2729.51	226.27	2577.57	2503.24	18.34	OSF1.50	19740.00	12225.24				MINPT-O-EOU	
	2731.53	229.38	2577.52	2502.15	18.10	OSF1.50	19850.00	12225.01				MINPT-O-EOU	
	2732.40	230.38	2577.72	2502.01	18.02	OSF1.50	19890.00	12224.92				MinPt-O-ADP	
	2739.01	235.72	2580.78	2503.30	17.65	OSF1.50	20080.00	12224.52				MinPt-O-ADP	
	2739.95	242.60	2577.14	2497.35	17.15	OSF1.50	20280.00	12224.09				MinPt-CtCt	
	2740.66	247.16	2574.81	2493.51	16.83	OSF1.50	20450.00	12223.73				MINPT-O-EOU	
	2741.42	248.08	2574.95	2493.34	16.78	OSF1.50	20490.00	12223.65				MinPt-O-ADP	
	2734.35	267.51	2554.92	2466.84	15.50	OSF1.50	21120.00	12222.31				MinPt-CtCt	
	2733.63	271.96	2551.24	2461.67	15.24	OSF1.50	21270.00	12221.99				MinPt-CtCt	
	2734.71	274.94	2550.33	2459.77	15.08	OSF1.50	21390.00	12221.73				MINPT-O-EOU	
	2736.43	277.01	2550.67	2459.42	14.98	OSF1.50	21470.00	12221.56				MinPt-O-ADP	
	2742.14	283.84	2551.83	2458.30	14.64	OSF1.50	21690.00	12221.10				MINPT-O-EOU	
	2737.16	299.89	2536.15	2437.28	13.82	OSF1.50	22204.93	12220.00				MinPts	
Final Surveys - Cimarex Red Hills 32-5 Fed Com #130H MWD 0ft-22088ft (Surcon Corrected) (Def Survey)													Pass
	4409.42	32.81	4408.13	4376.61	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4409.39	32.81	4408.06	4376.58	111862.28	MAS = 10.00 (m)	26.00	26.00				WRP	
	4409.04	32.81	4407.45	4376.23	14563.55	MAS = 10.00 (m)	100.00	100.00				MINPT-O-EOU	
	4408.80	32.81	4407.12	4375.99	8871.35	MAS = 10.00 (m)	160.00	160.00				MinPts	
	4408.87	32.81	4407.04	4376.06	6736.39	MAS = 10.00 (m)	200.00	200.00				MINPT-O-EOU	
	4410.44	32.81	4405.00	4377.64	1032.66	MAS = 10.00 (m)	980.00	980.00				MINPT-O-EOU	
	4405.66	32.81	4397.63	4372.85	630.81	MAS = 10.00 (m)	1600.00	1600.00				MinPts	
	4405.78	32.81	4397.54	4372.98	612.14	MAS = 10.00 (m)	1650.00	1650.00				MINPT-O-EOU	
	4406.93	32.81	4395.23	4374.12	413.70	MAS = 10.00 (m)	2420.00	2420.00				MinPts	
	4407.04	32.81	4395.12	4374.23	405.28	MAS = 10.00 (m)	2470.00	2470.00				MINPT-O-EOU	
	3318.03	39.56	3290.86	3278.47	133.79	OSF1.50	6630.00	6561.84				MinPt-O-SF	
	3260.94	40.64	3233.01	3220.30	128.15	OSF1.50	7810.00	7739.54				MinPt-CtCt	
	3255.75	46.23	3224.10	3209.52	111.62	OSF1.50	8980.00	8909.54				MinPt-CtCt	
	3256.07	46.97	3223.92	3209.10	109.79	OSF1.50	9120.00	9049.54				MINPT-O-EOU	
	3256.45	47.45	3223.98	3209.00	108.60	OSF1.50	9210.00	9139.54				MinPt-O-ADP	
	3259.17	49.63	3225.25	3209.55	103.67	OSF1.50	9640.00	9569.54				MINPT-O-EOU	
	3259.25	49.73	3225.27	3209.52	103.44	OSF1.50	9660.00	9589.54				MinPt-O-ADP	
	3259.78	57.90	3220.35	3201.88	88.20	OSF1.50	11140.00	11069.54				MinPt-CtCt	
	3259.84	58.09	3220.28	3201.76	87.91	OSF1.50	11170.00	11099.54				MINPT-O-EOU	
	3259.95	58.21	3220.31	3201.74	87.71	OSF1.50	11190.00	11119.54				MinPt-O-ADP	
	3275.98	61.73	3234.01	3214.25	82.84	OSF1.50	11800.46	11730.00				MinPt-O-SF	
	3276.46	61.67	3234.53	3214.79	82.93	OSF1.50	11900.00	11828.82				MinPt-O-SF	
	3276.39	61.61	3234.50	3214.78	83.01	OSF1.50	11910.00	11838.59				MinPt-O-ADP	
	3276.29	61.49	3234.48	3214.80	83.18	OSF1.50	11930.00	11857.96				MINPT-O-EOU	
	3276.25	61.37	3234.51	3214.88	83.35	OSF1.50	11950.00	11877.11				MinPt-CtCt	
	3278.95	60.15	3238.03	3218.80	85.16	OSF1.50	12180.00	12070.82				MinPt-O-SF	
	3271.40	59.03	3231.22	3212.37	86.69	OSF1.50	12490.00	12206.49				MinPts	
	3271.39	59.01	3231.23	3212.38	86.72	OSF1.50	12500.00	12208.61				MinPt-CtCt	
	3261.75	73.51	3211.94	3188.25	68.77	OSF1.50	14010.00	12237.43				MinPt-CtCt	
	3262.04	78.92	3208.62	3183.12	63.91	OSF1.50	14290.00	12236.84				MinPt-CtCt	
	3262.05	84.10	3205.18	3177.95	59.86	OSF1.50	14540.00	12236.31				MinPt-CtCt	
	3263.02	97.78	3197.03	3165.25	51.29	OSF1.50	15130.00	12235.05				MinPt-CtCt	
	3262.94	110.91	3188.20	3152.04	45.08	OSF1.50	15650.00	12233.94				MinPt-CtCt	
	3262.88	114.31	3185.87	3148.57	43.71	OSF1.50	15780.00	12233.67				MinPt-CtCt	
	3265.29	121.51	3183.48	3143.78	41.09	OSF1.50	16050.00	12233.09				MinPt-CtCt	
	3266.20	124.21	3182.59	3141.99	40.19	OSF1.50	16170.00	12232.84				MINPT-O-EOU	
	3269.53	134.25	3179.23	3135.28	37.17	OSF1.50	16540.00	12232.05				MINPT-O-EOU	
	3275.38	146.59	3176.85	3128.79	34.05	OSF1.50	16990.00	12231.09				MINPT-O-EOU	
	3276.13	147.48	3177.01	3128.64	33.85	OSF1.50	17030.00	12231.01				MinPt-O-ADP	
	3258.83	183.52	3135.68	3075.31	26.97	OSF1.50	18270.00	12228.37				MinPt-CtCt	
	3259.53	185.64	3134.97	3073.89	26.67	OSF1.50	18360.00	12228.18				MINPT-O-EOU	
	3262.32	193.97	3132.20	3068.35	25.53	OSF1.50	18650.00	12227.56				MINPT-O-EOU	
	3263.58	202.38	3127.85	3061.19	24.46	OSF1.50	18920.00	12226.99				MinPt-CtCt	
	3265.19	207.61	3125.98	3057.58	23.85	OSF1.50	19120.00	12226.56				MINPT-O-EOU	
	3271.42	221.32	3123.07	3050.10	22.40	OSF1.50	19590.00	12225.56				MINPT-O-EOU	
	3278.31	239.67	3117.73	3038.64	20.71	OSF1.50	20210.00	12224.24				MINPT-O-EOU	
	3279.30	240.86	3117.93	3038.44	20.61	OSF1.50	20260.00	12224.14				MinPt-O-ADP	
	3257.70	272.89	3074.97	2984.81	18.05	OSF1.50	21310.00	12221.90				MinPt-CtCt	
	3262.07	281.78	3073.40	2980.28	17.50	OSF1.50	21630.00	12221.22				MINPT-O-EOU	
	3263.52	283.56	3073.68	2979.96	17.40	OSF1.50	21700.00	12221.07				MinPt-O-ADP	
	3265.86	289.52	3072.04	2976.34	17.05	OSF1.50	21870.00	12220.71				MinPt-CtCt	
	3267.62	296.30	3069.29	2971.33	16.67	OSF1.50	22120.00	12220.18				MINPT-O-EOU	
	3269.00	299.30	3068.66	2969.70	16.50	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills 32-5 Fed Com #133H R0 JP 09Mar20 (Non-Def Plan)													Pass
	4530.82	32.81	4528.84	4498.01	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4530.82	32.81	4528.83	4498.01	328763.85	MAS = 10.00 (m)	26.00	26.00				WRP	
	3699.99	76.02	3648.31	3623.97	75.95	OSF1.50	9930.00	9859.54				MinPt-CtCt	
	3699.99	76.13	3648.24	3623.86	75.84	OSF1.50	9960.00	9889.54				MinPts	
	3717.74	76.32	3665.90	3641.42	75.88	OSF1.50	10580.00	10509.54				MinPt-O-SF	
	4172.36	319.36	3958.79	3853.00	19.71	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills 32-5 Fed Com #128H Rev3 RM 19Nov19 (Def Plan)													Pass
	4470.85	32.81	4469.57	4438.05	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4470.85	32.81	4469.55	4438.05	309485.97	MAS = 10.00 (m)	26.00	26.00				WRP	
	4215.99	35.50	4191.82	4180.49	186.04	OSF1.50	4110.00	4087.41				MinPt-O-SF	
	3702.82	85.06	3645.36	3617.76	67.04	OSF1.50	10460.00	10389.54				MinPts	
	3700.13	84.17	3643.26	3615.96	67.72	OSF1.50	10790.00	10719.54				MinPts	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	3711.91	84.50	3654.85	3627.41	67.59	OSF1.50	11150.00	11079.54				MinPt-O-SF	
	3931.86	311.38	3723.84	3620.48	19.01	OSF1.50	21970.00	12220.50				MinPt-CtCt	
	3932.25	312.62	3723.41	3619.63	18.94	OSF1.50	22030.00	12220.37				MINPT-O-EOU	
	3932.58	313.01	3723.48	3619.57	18.92	OSF1.50	22050.00	12220.33				MinPt-O-ADP	
	3938.61	315.81	3727.64	3622.80	18.78	OSF1.50	22204.93	12220.00				MinPt-O-SF	
Cimarex Red Hills 32-5 Fed Com #129H Rev2 RM 15Nov19 (Def Plan)													Pass
	4490.85	32.81	4489.56	4458.04	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4490.85	32.81	4489.54	4458.04	315727.57	MAS = 10.00 (m)	26.00	26.00				WRP	
	3729.94	82.06	3674.48	3647.88	70.06	OSF1.50	9810.00	9739.54				MinPts	
	3709.72	81.32	3654.74	3628.39	70.35	OSF1.50	10250.00	10179.54				MinPt-CtCt	
	3709.73	81.35	3654.74	3628.38	70.33	OSF1.50	10260.00	10189.54				MinPts	
	3723.68	82.00	3668.29	3641.68	69.94	OSF1.50	10590.00	10519.54				MinPt-O-SF	
	4172.71	311.99	3964.29	3860.73	20.14	OSF1.50	21980.00	12220.48				MinPt-CtCt	
	4173.06	313.00	3963.97	3860.07	20.08	OSF1.50	22030.00	12220.37				MINPT-O-EOU	
	4173.56	313.58	3964.08	3859.98	20.04	OSF1.50	22060.00	12220.31				MinPt-O-ADP	
	4179.00	316.22	3967.76	3862.78	19.90	OSF1.50	22204.93	12220.00				MinPt-O-SF	
Final Surveys - Cimarex Red Hills 32-5 Fed Com #131H MWD 0ft-22334 (Surcon Corrected) (Def Survey)													Pass
	4429.41	32.81	4428.24	4396.61	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4429.38	32.81	4428.16	4396.57	106839.58	MAS = 10.00 (m)	26.00	26.00				WRP	
	4428.66	32.81	4426.85	4395.85	6931.83	MAS = 10.00 (m)	190.00	190.00				MinPts	
	4428.79	32.81	4426.76	4395.98	5204.46	MAS = 10.00 (m)	240.00	240.00				MINPT-O-EOU	
	4429.76	32.81	4426.02	4396.95	1729.25	MAS = 10.00 (m)	630.00	630.00				MINPT-O-EOU	
	4340.07	32.81	4324.31	4307.26	296.52	MAS = 10.00 (m)	3940.00	3920.49				MinPt-O-SF	
	4290.07	32.81	4273.54	4257.26	279.96	MAS = 10.00 (m)	4230.00	4205.23				MinPt-O-SF	
	3855.01	38.58	3828.68	3816.43	157.25	OSF1.50	6600.00	6532.29				MinPt-O-SF	
	3806.65	36.71	3781.54	3769.94	163.98	OSF1.50	7100.00	7029.54				MinPt-O-ADP	
	3806.61	36.67	3781.53	3769.94	164.19	OSF1.50	7110.00	7039.54				MINPT-O-EOU	
	3806.49	36.78	3781.33	3769.71	163.66	OSF1.50	7230.00	7159.54				MinPt-CtCt	
	3806.64	37.22	3781.19	3769.42	161.61	OSF1.50	7330.00	7259.54				MINPT-O-EOU	
	3806.83	37.46	3781.22	3769.37	160.53	OSF1.50	7380.00	7309.54				MinPt-O-ADP	
	3806.98	38.14	3780.92	3768.85	157.54	OSF1.50	7550.00	7479.54				MinPt-CtCt	
	3804.02	41.18	3775.93	3762.84	145.25	OSF1.50	8240.00	8169.54				MinPt-CtCt	
	3800.82	45.10	3770.12	3755.72	131.97	OSF1.50	9060.00	8989.54				MinPt-CtCt	
	3799.64	47.15	3767.57	3752.49	125.97	OSF1.50	9460.00	9389.54				MinPt-CtCt	
	3799.74	47.43	3767.48	3752.31	125.20	OSF1.50	9510.00	9439.54				MINPT-O-EOU	
	3799.89	47.59	3767.52	3752.29	124.74	OSF1.50	9540.00	9469.54				MinPt-O-ADP	
	3791.32	54.78	3754.15	3736.54	107.58	OSF1.50	10850.00	10779.54				MinPt-CtCt	
	3791.16	55.64	3753.42	3735.52	105.86	OSF1.50	11000.00	10929.54				MinPt-CtCt	
	3791.29	55.98	3753.32	3735.30	105.19	OSF1.50	11060.00	10989.54				MINPT-O-EOU	
	3791.38	56.10	3753.34	3735.29	104.97	OSF1.50	11080.00	11009.54				MinPt-O-ADP	
	3798.45	60.34	3757.58	3738.11	97.48	OSF1.50	11800.46	11730.00				MinPt-O-SF	
	3816.76	61.54	3775.15	3755.22	95.71	OSF1.50	13380.00	12238.77				MinPt-CtCt	
	3816.90	65.15	3772.88	3751.75	90.26	OSF1.50	13640.00	12238.22				MinPt-CtCt	
	3817.25	66.15	3772.57	3751.10	88.87	OSF1.50	13720.00	12238.05				MINPT-O-EOU	
	3814.49	83.82	3758.02	3730.67	69.69	OSF1.50	14620.00	12236.14				MinPt-CtCt	
	3812.60	92.56	3750.31	3720.04	62.95	OSF1.50	14990.00	12235.35				MinPt-CtCt	
	3811.42	101.33	3743.28	3710.09	57.39	OSF1.50	15350.00	12234.58				MinPt-CtCt	
	3811.95	111.95	3736.74	3700.01	51.87	OSF1.50	15760.00	12233.71				MinPt-CtCt	
	3813.35	121.71	3731.62	3691.64	47.66	OSF1.50	16130.00	12232.92				MinPt-CtCt	
	3816.38	133.13	3727.04	3683.25	43.55	OSF1.50	16570.00	12231.99				MINPT-O-EOU	
	3820.68	143.16	3724.65	3677.52	40.51	OSF1.50	16930.00	12231.22				MINPT-O-EOU	
	3822.05	144.83	3724.91	3677.22	40.05	OSF1.50	17000.00	12231.07				MinPt-O-ADP	
	3827.09	151.26	3725.67	3675.83	38.38	OSF1.50	17220.00	12230.60				MINPT-O-EOU	
	3794.27	190.15	3666.91	3604.13	30.20	OSF1.50	18550.00	12227.78				MinPt-CtCt	
	3794.94	192.20	3666.21	3602.74	29.88	OSF1.50	18640.00	12227.58				MINPT-O-EOU	
	3795.69	193.10	3666.36	3602.59	29.75	OSF1.50	18680.00	12227.50				MinPt-O-ADP	
	3841.36	215.95	3696.82	3625.41	26.88	OSF1.50	19510.00	12225.73				MinPts	
	3807.77	242.03	3645.82	3565.73	23.76	OSF1.50	20320.00	12224.01				MinPt-CtCt	
	3810.59	249.92	3643.39	3560.67	23.02	OSF1.50	20610.00	12223.39				MINPT-O-EOU	
	3812.56	252.29	3643.78	3560.28	22.82	OSF1.50	20700.00	12223.20				MinPt-O-ADP	
	3815.30	258.89	3642.12	3556.41	22.25	OSF1.50	20890.00	12222.80				MinPt-CtCt	
	3816.81	263.30	3640.69	3553.51	21.88	OSF1.50	21060.00	12222.44				MINPT-O-EOU	
	3814.05	270.82	3632.92	3543.23	21.25	OSF1.50	21290.00	12221.95				MinPt-CtCt	
	3799.48	297.99	3600.23	3501.50	19.23	OSF1.50	22200.00	12220.01				MinPt-CtCt	
	3799.49	298.09	3600.17	3501.40	19.22	OSF1.50	22204.93	12220.00				MinPts	
Cimarex Red Hills 32-5 Fed Com #132H Rev1 RM 29Oct20 (Def Plan)													Pass
	4510.84	32.81	4509.55	4478.03	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4510.84	32.81	4509.54	4478.03	322167.35	MAS = 10.00 (m)	26.00	26.00				WRP	
	4510.84	32.81	4499.31	4478.03	440.20	MAS = 10.00 (m)	1690.00	1690.00				MinPts	
	4510.89	32.81	4499.22	4478.08	434.24	MAS = 10.00 (m)	1730.00	1730.00				MINPT-O-EOU	
	4539.33	32.81	4525.84	4506.52	372.11	MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF	
	3812.10	76.46	3760.40	3735.64	76.96	OSF1.50	10530.00	10459.54				MinPt-CtCt	
	3812.12	76.61	3760.31	3735.51	76.81	OSF1.50	10560.00	10489.54				MinPts	
	3843.21	77.41	3790.93	3765.80	76.42	OSF1.50	11310.00	11239.54				MinPt-O-SF	
	4022.90	73.67	3973.36	3949.23	83.34	OSF1.50	12680.00	12234.94				MinPt-O-SF	
	4019.14	318.19	3806.59	3700.96	19.02	OSF1.50	22204.93	12220.00				MinPts	
Rector Oil Maechtel Permit #1 (Offset) Plugged Oil Blind 0ft-5006ft (Def Survey)													Pass
	10747.11	32.81	10745.82	10714.30	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	10746.84	32.81	10745.52	10714.03	265806.98	MAS = 10.00 (m)	26.00	26.00				MinPt-O-SF	
	10634.44	1559.25	9594.48	9075.20	10.24	OSF1.50	5390.00	5344.20				MinPt-O-SF	
	10632.59	1558.67	9593.01	9073.92	10.24	OSF1.50	5540.00	5491.48				MinPt-O-ADP	
	10632.50	1558.57	9592.99	9073.93	10.24	OSF1.50	5560.00	5511.11				MINPT-O-EOU	
	10632.44	1558.35	9593.08	9074.08	10.24	OSF1.50	5600.00	5550.39				MinPt-CtCt	
	9977.11	1097.59	9244.95	8879.52	13.65	OSF1.50	16060.00	12233.07				MinPt-O-SF	
	8038.19	768.33	7525.54	7269.86	15.72	OSF1.50	21970.00	12220.50				MinPt-CtCt	
	8038.35	768.77	7525.40	7269.57	15.71	OSF1.50	22020.00	12220.39				MINPT-O-EOU	
	8038.69	769.19	7525.47	7269.50	15.70	OSF1.50	22060.00	12220.31				MinPt-O-ADP	
	8041.62	771.22	7527.05	7270.40	15.66	OSF1.50	22204.93	12220.00				MinPt-O-SF	

Hydrogen Sulfide Drilling Operations Plan
Red Hills 32-5 State Com #198H
Cimarex Energy Co.
UL: B, Sec. 32, 25S, 33E
Lea Co., NM

1 All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:

A. Characteristics of H_2S
B. Physical effects and hazards
C. Principal and operation of H2S detectors, warning system and briefing areas.
D. Evacuation procedure, routes and first aid.
E. Proper use of safety equipment & life support systems
F. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30 minute pressure demand air packs.

H_2S Detection and Alarm Systems:

A. H2S sensors/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may play placed as deemed necessary.

B. An audio alarm system will be installed on the derrick floor and in the top doghouse.

3 Windsock and/or wind streamers:

A. Windsock at mudpit area should be high enough to be visible.
B. Windsock on the rig floor and / or top doghouse should be high enough to be visible.

4 Condition Flags and Signs

A. Warning sign on access road to location.
B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H_2S present in dangerous concentration). Only H2S trained and certified personnel admitted to location.

5 Well control equipment:

A. See exhibit "E-1"

6 Communication:

A. While working under masks chalkboards will be used for communication.
B. Hand signals will be used where chalk board is inappropriate.
C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

7 Drillstem Testing:
No DSTs r cores are planned at this time.

8 Drilling contractor supervisor will be required to be familiar with the effects H_2S has on tubular goods and other mechanical equipment.

9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary.

H_2S Contingency Plan
Red Hills 32-5 State Com #198H
Cimarex Energy Co. UL: B, Sec. 32, 25S, 33E
Lea Co., NM

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must:

« Isolate the area and prevent entry by other persons into the 100 ppm ROE.
« Evacuate any public places encompassed by the 100 ppm ROE.
« Be equipped with H_2S monitors and air packs in order to control the release.
« Use the "buddy system" to ensure no injuries occur during the 432-620-1975
« Take precautions to avoid personal injury during this operation.
« Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
« Have received training in the:
  · Detection of H_2S, and
  · Measures for protection against the gas,
  · Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H_2S and SO_2

Please see attached International Chemical Safety Cards.

Contacting Authorities

Cimarex Energy Co. of Colorado's personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Cimarex Energy Co. of Colorado's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

H_2S Contingency Plan Emergency Contact
s **Red Hills 32-5 State Com #198** Cimarex
Energy Co.
UL: B, Sec. 32, 25S, 33E
Lea Co., NM

Company Office			
Cimarex Energy Co. of Colorado		800-969-4789	
Co. Office and After-Hours Menu			

Key Personnel

Name	**Title**	**Office**	**Mobile**
Larry Seigrist	Drilling Manager	432-620-1934	580-243-8485
Charlie Pritchard	Drilling Superintendent	432-620-1975	432-238-7084
Roy Shirley	Construction Superintendent		432-634-2136

Artesia			
Ambulance		911	
State Police		575-746-2703	
City Police		575-746-2703	
Sheriff's Office		575-746-9888	
Fire Department		**575-746-2701**	
Local Emergency Planning Committee		575-746-2122	
New Mexico Oil Conservation Division		575-748-1283	

Carlsbad			
Ambulance		911	
State Police		575-885-3137	
City Police		575-885-2111	
Sheriff's Office		575-887-7551	
Fire Department		**575-887-3798**	
Local Emergency Planning Committee		575-887-6544	
US Bureau of Land Management		575-887-6544	

Santa Fe			
New Mexico Emergency Response Commission (Santa Fe)		505-476-9600	
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs		505-827-9126	
New Mexico State Emergency Operations Center		505-476-9635	

National			
National Emergency Response Center (Washington, D.C.)		800-424-8802	

Medical			
Flight for Life - 4000 24th St.; Lubbock, TX		806-743-9911	
Aerocare - R3, Box 49F; Lubbock, TX		806-747-8923	
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM		505-842-4433	
SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM		505-842-4949	

Other			
Boots & Coots IWC		800-256-9688	or 281-931-8884
Cudd Pressure Control		432-699-0139	or 432-563-3356
Halliburton		575-746-2757	
B.J. Services		575-746-3569	

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018