

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTCarlsbad Field Office
HobbsFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 20185. Lease Serial No.
NMNM0553548

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.
DOS EQUIS 13 FEDERAL COM 10H9. API Well No.
30-025-45417-00-X110. Field and Pool or Exploratory Area
WOLFCAMP11. County or Parish, State
LEA COUNTY, NMDO NOT use this form for proposals to drill or to re-enter an
abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other2. Name of Operator
CIMAREX ENERGY COMPANYContact: AMITHY E CRAWFORD
E-Mail: acrawford@cimarex.com3a. Address
600 N. MARIENFELD SUITE 600
MIDLAND, TX 797013b. Phone No. (include area code)
Ph: 432-620-1909

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 13 T24S R32E NENW 240FNL 1330FWL
32.224251 N Lat, 103.632561 W Lon

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Cimarex respectfully requests approval to change the SHL and BHL there by changing the directional plan. No additional disturbance is required for the well pad.

Approved:

SHL: 240 FNL & 1330 FWL, Sec 13, 24S, 32E
BHL: 330 FSL & 660 FWL, Sec 13, 24S, 32E

Proposed

SHL: 360 FNL & 1320 FWL, Sec 13, 24S, 32E
BHL: 100 FSL & 440 FWL, Sec 13, 24S, 32E

Engineering Good P.
08-01-2019
No Drilling/Casing Plan Changes
Same COAs

Surface good 7-31-2019 Same COA'S

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #473040 verified by the BLM Well Information System
For CIMAREX ENERGY COMPANY, sent to the Hobbs
Committed to AFMSS for processing by JUANA MEDRANO on 07/11/2019 (19JM0077SE)

Name (Printed/Typed) AMITHY E CRAWFORD

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 07/11/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

Additional data for EC transaction #473040 that would not fit on the form

32. Additional remarks, continued

Please see attached: C-102, Drilling Plan, Directional Plan.

Revisions to Operator-Submitted EC Data for Sundry Notice #473040

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM0553548	NMNM0553548
Agreement:		
Operator:	CIMAREX ENERGY CO. 600 N. MARIENFELD, SUITE 600 MIDLAND, TX 79701 Ph: 432-620-1909	CIMAREX ENERGY COMPANY 600 N. MARIENFELD SUITE 600 MIDLAND, TX 79701 Ph: 432.620.1938
Admin Contact:	AMITHY E CRAWFORD REGULATORY ANALYST E-Mail: acrawford@cimarex.com Ph: 432-620-1909	AMITHY E CRAWFORD REGULATORY ANALYST E-Mail: acrawford@cimarex.com Ph: 432-620-1909
Tech Contact:	AMITHY E CRAWFORD REGULATORY ANALYST E-Mail: acrawford@cimarex.com Ph: 432-620-1909	AMITHY E CRAWFORD REGULATORY ANALYST E-Mail: acrawford@cimarex.com Ph: 432-620-1909
Location:		
State:	NM	NM
County:	LEA	LEA
Field/Pool:	TRIPLE X; BONE SPRING	WOLFCAMP
Well/Facility:	DOS EQUIS 13 FEDERAL COM 10H Sec 13 T24S R32E 360FNL 1320FWL	DOS EQUIS 13 FEDERAL COM 10H Sec 13 T24S R32E NENW 240FNL 1330FWL 32.224251 N Lat, 103.632561 W Lon

1. Geological Formations

TVD of target 11,030

Pilot Hole TD N/A

MD at TD 15,690

Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	1185	N/A	
Salado (Top Salt)	1500	N/A	
Base of Salt	4650	N/A	
Delaware Sands	4920	N/A	
Bone Spring	8815	Hydrocarbons	
1st Bone Spring Sand	9910	Hydrocarbons	
2nd Bone Spring Sand	10635	Hydrocarbons	
2nd Bone Spring Sand Target	11030	Hydrocarbons	
3rd Bone Spring Sand	11835	Hydrocarbons	
Wolfcamp	12245	Hydrocarbons	

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1235	1235	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	1.31	3.06	5.43
12 1/4	0	4900	4900	9-5/8"	40.00	J-55	LT&C	1.32	1.52	2.65
8 3/4	0	10611	10611	5-1/2"	17.00	L-80	LT&C	1.27	1.56	1.80
8 3/4	10611	15690	11030	5-1/2"	17.00	L-80	BT&C	1.22	1.50	55.73
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

Cimarex Energy Co., Dos Equis 13 Federal Com #10H

	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	# Sk	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	599	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	160	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	919	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	286	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	510	10.30	3.64	22.18		Lead: Tuned Light + LCM
	1234	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	45
Intermediate	0	51
Production	4700	25

4. Pressure Control Equipment

A variance is requested for the use of a diverter on the surface casing. See attached for schematic.					
BOP installed and tested before drilling which hole?	Size	Min Required WP	Type		Tested To
12 1/4	13 5/8	2M	Annular	X	50% of working pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram	X	
			Other		
8 3/4	13 5/8	3M	Annular	X	50% of working pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	X	
			Other		

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

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

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

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 1235'	FW Spud Mud	8.30 - 8.80	30-32	N/C
1235' to 4900'	Brine Water	9.70 - 10.20	30-32	N/C
4900' to 15690'	Cut Brine or OBM	8.50 - 9.00	27-70	N/C

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

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

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

Additional Logs Planned	Interval
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7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	5162 psi
Abnormal Temperature	No

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

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

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

A multi-bowl wellhead system will be utilized.

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

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

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

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

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

The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

The casing string utilizing steel body pack-off will be tested to 70% of casing burst.

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

Cimarex Dos Equis 13 Federal Com #10H Rev1 28Jun19 Proposal Geodetic

Report
(Def Plan)

Report Date: June 28, 2019 - 10:30 AM
 Client: Cimarex
 Field: NM Les County (NAD 83)
 Structure / Slot: Cimarex Dos Equis 13 Federal Com #10H / Cimarex Dos Equis 13 Federal Com #10H
 Well: Cimarex Dos Equis 13 Federal Com #10H
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Cimarex Dos Equis 13 Federal Com #10H Rev1 28Jun19
 Survey Date: June 28, 2019
 Tort / AHD / DDI / ERD Ratio: 108.065 * / 5688.856 ft / 5.942 / 0.518
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 13' 26.1162", W 103° 37' 57.33071"
 Location Grid N/E Y/X: N 445902.490 RUS, E 758031.770 RUS
 CRS Grid Convergence Angle: 0.3737 *
 Grid Scale Factor: 0.99998287
 Version / Patch: 2.10.760.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 179.551 * (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB
 TVD Reference Elevation: 3848.500 ft above MSL
 Seabed / Ground Elevation: 3820.500 ft above MSL
 Magnetic Declination: 6.877 *
 Total Gravity Field Strength: 998.4332mgn (9.80685 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 47898.839 nT
 Magnetic Dip Angle: 59.883 *
 Declination Date: June 28, 2019
 Magnetic Declination Model: HDGM 2019
 North Reference: Grid North
 Grid Convergence Used: 0.3737 *
 Total Corr Mag North->Grid North: 6.3033 *
 Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL (360° FNL, 1320° FWL)	0.00	0.00	189.92	0.00	0.00	0.00	0.00	N/A	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	100.00	0.00	269.10	100.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	200.00	0.00	269.10	200.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	300.00	0.00	269.10	300.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	400.00	0.00	269.10	400.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	500.00	0.00	269.10	500.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	600.00	0.00	269.10	600.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	700.00	0.00	269.10	700.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	800.00	0.00	269.10	800.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	900.00	0.00	269.10	900.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
1st Bone Spring Sand	1000.00	0.00	269.10	1000.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	1100.00	0.00	269.10	1100.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
Rustler	1185.00	0.00	269.10	1185.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	1200.00	0.00	269.10	1200.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	1300.00	0.00	269.10	1300.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	1400.00	0.00	269.10	1400.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
Salado (Top Salt)	1500.00	0.00	269.10	1500.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	1600.00	0.00	269.10	1600.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	1700.00	0.00	269.10	1700.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	1800.00	0.00	269.10	1800.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	1900.00	0.00	269.10	1900.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	2000.00	0.00	269.10	2000.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	2100.00	0.00	269.10	2100.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	2200.00	0.00	269.10	2200.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	2300.00	0.00	269.10	2300.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	2400.00	0.00	269.10	2400.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
Nudge 2"/100' DLS	2500.00	0.00	269.10	2500.00	0.00	0.00	0.00	0.00	445902.49	758031.77	N 32 13 26.11	W 103 37 57.33
	2600.00	2.00	269.10	2599.98	0.01	-0.03	-1.74	2.00	445902.48	758030.03	N 32 13 26.11	W 103 37 57.35
	2700.00	4.00	269.10	2699.84	0.05	-0.11	-6.98	2.00	445902.38	758024.79	N 32 13 26.11	W 103 37 57.41
	2800.00	6.00	269.10	2799.45	0.12	-0.25	-15.89	2.00	445902.24	758016.08	N 32 13 26.11	W 103 37 57.51
	2900.00	8.00	269.10	2898.70	0.22	-0.44	-27.88	2.00	445902.05	758003.89	N 32 13 26.11	W 103 37 57.68
Hold Nudge	2954.94	9.10	269.10	2953.03	0.28	-0.57	-38.04	2.00	445901.92	757995.73	N 32 13 26.11	W 103 37 57.75
	3000.00	9.10	269.10	2997.52	0.34	-0.68	-43.17	0.00	445901.81	757988.60	N 32 13 26.11	W 103 37 57.83
	3100.00	9.10	269.10	3098.27	0.40	-0.93	-58.98	0.00	445901.56	757972.79	N 32 13 26.11	W 103 37 58.02
	3200.00	9.10	269.10	3185.01	0.59	-1.17	-74.79	0.00	445901.32	757956.98	N 32 13 26.10	W 103 37 58.20
	3300.00	9.10	269.10	3293.75	0.71	-1.42	-90.80	0.00	445901.07	757941.17	N 32 13 26.10	W 103 37 58.39
	3400.00	9.10	269.10	3392.49	0.84	-1.67	-106.41	0.00	445900.82	757925.38	N 32 13 26.10	W 103 37 58.57
	3500.00	9.10	269.10	3491.23	0.98	-1.92	-122.23	0.00	445900.57	757909.55	N 32 13 26.10	W 103 37 58.75
	3600.00	9.10	269.10	3589.97	1.09	-2.17	-138.04	0.00	445900.32	757893.74	N 32 13 26.10	W 103 37 58.94
	3700.00	9.10	269.10	3688.72	1.21	-2.42	-153.85	0.00	445900.07	757877.93	N 32 13 26.10	W 103 37 59.12
	3800.00	9.10	269.10	3787.46	1.33	-2.66	-169.66	0.00	445899.83	757862.12	N 32 13 26.10	W 103 37 59.31
	3900.00	9.10	269.10	3886.20	1.46	-2.91	-185.47	0.00	445899.58	757846.31	N 32 13 26.09	W 103 37 59.49
	4000.00	9.10	269.10	3984.94	1.58	-3.16	-201.28	0.00	445899.33	757830.49	N 32 13 26.09	W 103 37 59.67
	4100.00	9.10	269.10	4083.68	1.71	-3.41	-217.10	0.00	445899.08	757814.68	N 32 13 26.09	W 103 37 59.86
	4200.00	9.10	269.10	4182.42	1.83	-3.66	-232.91	0.00	445898.83	757798.87	N 32 13 26.09	W 103 38 0.04
	4300.00	9.10	269.10	4281.17	1.96	-3.91	-248.72	0.00	445898.58	757783.06	N 32 13 26.09	W 103 38 0.23
	4400.00	9.10	269.10	4379.91	2.08	-4.15	-264.53	0.00	445898.34	757767.25	N 32 13 26.09	W 103 38 0.41
	4500.00	9.10	269.10	4478.65	2.20	-4.40	-280.34	0.00	445898.09	757751.44	N 32 13 26.09	W 103 38 0.59
	4600.00	9.10	269.10	4577.39	2.33	-4.65	-296.15	0.00	445897.84	757735.63	N 32 13 26.08	W 103 38 0.78
Base of Salt	4673.53	9.10	269.10	4650.00	2.42	-4.83	-307.78	0.00	445897.66	757724.00	N 32 13 26.08	W 103 38 0.91
	4700.00	9.10	269.10	4676.13	2.45	-4.90	-311.97	0.00	445897.59	757719.82	N 32 13 26.08	W 103 38 0.98
	4800.00	9.10	269.10	4774.87	2.58	-5.15	-327.78	0.00	445897.34	757704.01	N 32 13 26.08	W 103 38 1.15
	4900.00	9.10	269.10	4873.62	2.70	-5.39	-343.59	0.00	445897.10	757688.20	N 32 13 26.08	W 103 38 1.33
Delaware Sands	4948.97	9.10	269.10	4920.00	2.78	-5.51	-351.02	0.00	445896.98	757680.77	N 32 13 26.08	W 103 38 1.42
	5000.00	9.10	269.10	4972.38	2.83	-5.64	-359.40	0.00	445896.85	757672.38	N 32 13 26.08	W 103 38 1.51
	5100.00	9.10	269.10	5071.10	2.95	-5.89	-375.21	0.00	445896.60	757658.57	N 32 13 26.08	W 103 38 1.70
	5200.00	9.10	269.10	5169.84	3.07	-6.14	-391.02	0.00	445896.35	757640.78	N 32 13 26.08	W 103 38 1.88
	5300.00	9.10	269.10	5268.58	3.20	-6.39	-406.83	0.00	445896.10	757624.95	N 32 13 26.07	W 103 38 2.07
	5400.00	9.10	269.10	5367.33	3.32	-6.64	-422.65	0.00	445895.85	757609.14	N 32 13 26.07	W 103 38 2.25
	5500.00	9.10	269.10	5466.07	3.45	-6.88	-438.46	0.00	445895.61	757593.33	N 32 13 26.07	W 103 38 2.44
	5600.00	9.10	269.10	5564.81	3.57	-7.13	-454.27	0.00	445895.36	757577.52	N 32 13 26.07	W 103 38 2.62
	5700.00	9.10	269.10	5663.55	3.70	-7.38	-470.08	0.00	445895.11	757561.71	N 32 13 26.07	W 103 38 2.80
	5800.00	9.10	269.10	5762.29	3.82	-7.63	-485.89	0.00	445894.86	757545.90	N 32 13 26.07	W 103 38 2.99
	5900.00	9.10	269.10	5861.03	3.95	-7.88	-501.70	0.00	445894.61	757530.09	N 32 13 26.07	W 103 38 3.17
	6000.00	9.10	269.10	5959.78	4.07	-8.13	-517.52	0.00	445894.37	757514.27	N 32 13 26.08	W 103 38 3.36
	6100.00	9.10	269.10	6058.52	4.19	-8.37	-533.33	0.00	445894.12	757498.46	N 32 13 26.08	W 103 38 3.54
	6200.00	9.10	269.10	6157.26	4.32	-8.62	-549.14	0.00	445893.87	757482.65	N 32 13 26.08	W 103 38 3.72
	6300.00	9.10	269.10	6256.00	4.44	-8.87	-564.95	0.00	445893.62	757466.84	N 32 13 26.08	W 103 38 3.91
	6400.00	9.10	269.10	6354.74	4.57	-9.12	-580.76	0.00	445893.37	757451.03	N 32 13 26.08	W 103 38 4.09
	6500.00	9.10	269.10	6453.48	4.69	-9.37	-596.57	0.00	445893.12	757435.22	N 32 13 26.08	W 103 38 4.28
	6600.00	9.10	269.10	6552.23	4.82	-9.61	-612.39	0.00	445892.88	757419.41	N 32 13 26.08	W 103 38 4.46
	6700.00	9.10	269.10	6650.97	4.94	-9.86	-628.20	0.00	445892.63	757403.60	N 32 13 26.05	W 103 38 4.64

Comments	MD (ft)	Incl (°)	Azim Grd (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ft)	Easting (ft)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	6800.00	9.10	269.10	6749.71	5.08	-10.11	-844.01	0.00	445892.38	757387.70	N 32 13 26.05 W 103 38	4.83
	6900.00	9.10	269.10	6848.45	5.19	-10.38	-859.82	0.00	445892.13	757371.98	N 32 13 26.05 W 103 38	5.01
	7000.00	9.10	269.10	6947.19	5.31	-10.61	-875.63	0.00	445891.88	757356.18	N 32 13 26.05 W 103 38	5.20
	7100.00	9.10	269.10	7045.93	5.44	-10.88	-891.44	0.00	445891.63	757340.35	N 32 13 26.05 W 103 38	5.39
	7200.00	9.10	269.10	7144.68	5.58	-11.10	-907.26	0.00	445891.39	757324.54	N 32 13 26.05 W 103 38	5.56
	7300.00	9.10	269.10	7243.42	5.69	-11.35	-923.07	0.00	445891.14	757308.73	N 32 13 26.05 W 103 38	5.75
	7400.00	9.10	269.10	7342.16	5.81	-11.60	-938.88	0.00	445890.89	757292.92	N 32 13 26.04 W 103 38	5.93
	7500.00	9.10	269.10	7440.90	5.93	-11.85	-954.69	0.00	445890.64	757277.11	N 32 13 26.04 W 103 38	6.12
	7600.00	9.10	269.10	7539.64	6.06	-12.10	-970.50	0.00	445890.39	757261.30	N 32 13 26.04 W 103 38	6.30
	7700.00	9.10	269.10	7638.39	6.18	-12.35	-986.31	0.00	445890.14	757245.49	N 32 13 26.04 W 103 38	6.48
	7800.00	9.10	269.10	7737.13	6.31	-12.59	-1002.13	0.00	445889.90	757229.68	N 32 13 26.04 W 103 38	6.67
	7900.00	9.10	269.10	7835.87	6.43	-12.84	-1017.94	0.00	445889.65	757213.87	N 32 13 26.04 W 103 38	6.85
	8000.00	9.10	269.10	7934.61	6.56	-13.09	-1033.75	0.00	445889.40	757198.05	N 32 13 26.04 W 103 38	7.04
Drop to Vertical 2"/100' DLS	8086.22	9.10	269.10	8000.00	6.64	-13.25	-1049.56	0.00	445889.15	757182.24	N 32 13 26.03 W 103 38	7.16
	8100.00	8.42	269.10	8033.38	6.68	-13.34	-1049.36	2.00	445889.15	757182.44	N 32 13 26.03 W 103 38	7.22
	8200.00	6.42	269.10	8132.54	6.78	-13.54	-1065.28	2.00	445888.95	757166.52	N 32 13 26.03 W 103 38	7.37
	8300.00	4.42	269.10	8232.09	6.85	-13.69	-1081.19	2.00	445888.80	757160.07	N 32 13 26.03 W 103 38	7.48
	8400.00	2.42	269.10	8331.90	6.90	-13.78	-1097.10	2.00	445888.71	757154.10	N 32 13 26.03 W 103 38	7.55
	8500.00	0.42	269.10	8431.87	6.92	-13.82	-1113.01	2.00	445888.67	757151.62	N 32 13 26.03 W 103 38	7.58
Hold Vertical	8521.16	0.00	269.10	8453.03	6.92	-13.82	-1128.82	2.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	8600.00	0.00	269.10	8531.87	6.92	-13.82	-1144.63	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	8700.00	0.00	269.10	8610.71	6.92	-13.82	-1160.44	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	8800.00	0.00	269.10	8689.55	6.92	-13.82	-1176.25	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	8900.00	0.00	269.10	8768.39	6.92	-13.82	-1192.06	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
Bone Spring	8938.13	0.00	269.10	8847.23	6.92	-13.82	-1207.87	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	9000.00	0.00	269.10	8926.07	6.92	-13.82	-1223.68	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	9100.00	0.00	269.10	9004.91	6.92	-13.82	-1239.49	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	9200.00	0.00	269.10	9083.75	6.92	-13.82	-1255.30	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	9300.00	0.00	269.10	9162.59	6.92	-13.82	-1271.11	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	9400.00	0.00	269.10	9241.43	6.92	-13.82	-1286.92	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	9500.00	0.00	269.10	9320.27	6.92	-13.82	-1302.73	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	9600.00	0.00	269.10	9399.11	6.92	-13.82	-1318.54	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	9700.00	0.00	269.10	9477.95	6.92	-13.82	-1334.35	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	9800.00	0.00	269.10	9556.79	6.92	-13.82	-1350.16	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	9900.00	0.00	269.10	9635.63	6.92	-13.82	-1365.97	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	10000.00	0.00	269.10	9714.47	6.92	-13.82	-1381.78	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	10100.00	0.00	269.10	10033.31	6.92	-13.82	-1397.59	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	10200.00	0.00	269.10	10112.15	6.92	-13.82	-1413.40	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	10300.00	0.00	269.10	10190.99	6.92	-13.82	-1429.21	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	10400.00	0.00	269.10	10269.83	6.92	-13.82	-1445.02	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	10500.00	0.00	269.10	10348.67	6.92	-13.82	-1460.83	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
	10600.00	0.00	269.10	10427.51	6.92	-13.82	-1476.64	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
KOP - Build 12"/100' DLS	10610.67	0.00	269.10	10506.35	6.92	-13.82	-1492.45	0.00	445888.67	757151.54	N 32 13 26.03 W 103 38	7.58
2nd Bone Spring Sand	10729.35	14.24	179.55	10680.00	21.80	-28.49	-1880.15	12.00	445880.34	757151.61	N 32 13 25.95 W 103 38	7.58
	10800.00	22.72	179.55	10758.84	43.97	-50.87	-1978.97	12.00	445851.62	757151.83	N 32 13 25.89 W 103 38	7.58
	10900.00	34.72	179.55	10837.68	91.94	-98.83	-2077.79	12.00	445803.66	757152.21	N 32 13 25.19 W 103 38	7.58
	11000.00	46.72	179.55	10916.52	157.05	-163.95	-2176.61	12.00	445738.55	757152.72	N 32 13 24.55 W 103 38	7.58
	11100.00	58.72	179.55	10995.36	236.48	-243.37	-2275.43	12.00	445669.13	757153.34	N 32 13 23.76 W 103 38	7.57
	11200.00	70.72	179.55	11074.20	326.73	-333.62	-2374.25	12.00	445598.88	757154.05	N 32 13 22.87 W 103 38	7.57
	11300.00	82.72	179.55	11153.04	423.68	-430.77	-2473.07	12.00	445528.63	757154.81	N 32 13 21.91 W 103 38	7.57
Landing Point 2nd BSPG Sand Target	11359.57	89.87	179.55	11231.88	483.28	-490.17	-2571.89	12.00	445458.38	757155.28	N 32 13 21.32 W 103 38	7.57
	11400.00	89.87	179.55	11310.72	523.72	-530.80	-2670.71	0.00	445371.91	757155.60	N 32 13 20.92 W 103 38	7.57
	11500.00	89.87	179.55	11389.56	623.72	-630.60	-2769.53	0.00	445285.42	757155.92	N 32 13 19.93 W 103 38	7.57
	11600.00	89.87	179.55	11468.40	723.72	-730.59	-2868.35	0.00	445198.93	757156.24	N 32 13 18.94 W 103 38	7.57
	11700.00	89.87	179.55	11547.24	823.72	-830.59	-2967.17	0.00	445112.44	757156.56	N 32 13 17.95 W 103 38	7.57
	11800.00	89.87	179.55	11626.08	923.72	-930.59	-3066.00	0.00	445025.95	757156.88	N 32 13 16.96 W 103 38	7.56
	11900.00	89.87	179.55	11704.92	1023.72	-1030.59	-3164.82	0.00	444939.46	757157.20	N 32 13 15.97 W 103 38	7.56
	12000.00	89.87	179.55	11783.76	1123.72	-1130.59	-3263.64	0.00	444852.97	757157.52	N 32 13 14.98 W 103 38	7.56
	12100.00	89.87	179.55	11862.60	1223.72	-1230.59	-3362.46	0.00	444766.48	757157.84	N 32 13 13.99 W 103 38	7.56
	12200.00	89.87	179.55	11941.44	1323.72	-1330.57	-3461.28	0.00	444679.99	757158.16	N 32 13 13.00 W 103 38	7.56
	12300.00	89.87	179.55	12020.28	1423.72	-1430.57	-3560.10	0.00	444593.50	757158.48	N 32 13 12.01 W 103 38	7.56
	12400.00	89.87	179.55	12099.12	1523.72	-1530.57	-3658.92	0.00	444507.01	757158.80	N 32 13 11.02 W 103 38	7.55
	12500.00	89.87	179.55	12177.96	1623.72	-1630.56	-3757.74	0.00	444420.52	757159.12	N 32 13 10.03 W 103 38	7.55
	12600.00	89.87	179.55	12256.80	1723.72	-1730.56	-3856.56	0.00	444334.03	757159.44	N 32 13 9.04 W 103 38	7.55
	12700.00	89.87	179.55	12335.64	1823.72	-1830.56	-3955.38	0.00	444247.54	757159.76	N 32 13 8.05 W 103 38	7.55
	12800.00	89.87	179.55	12414.48	1923.72	-1930.55	-4054.20	0.00	444161.05	757160.08	N 32 13 7.06 W 103 38	7.55
	12900.00	89.87	179.55	12493.32	2023.72	-2030.55	-4153.02	0.00	444074.56	757160.40	N 32 13 6.07 W 103 38	7.55
	13000.00	89.87	179.55	12572.16	2123.72	-2130.55	-4251.84	0.00	443988.07	757160.72	N 32 13 5.08 W 103 38	7.55
	13100.00	89.87	179.55	12650.99	2223.72	-2230.54	-4350.66	0.00	443901.58	757161.04	N 32 13 4.09 W 103 38	7.54
	13200.00	89.87	179.55	12729.83	2323.72	-2330.54	-4449.48	0.00	443815.09	757161.36	N 32 13 3.10 W 103 38	7.54
	13300.00	89.87	179.55	12808.67	2423.72	-2430.54	-4548.30	0.00	443728.60	757161.68	N 32 13 2.11 W 103 38	7.54
	13400.00	89.87	179.55	12887.51	2523.72	-2530.53	-4647.12	0.00	443642.11	757162.00	N 32 13 1.12 W 103 38	7.54
	13500.00	89.87	179.55	12966.35	2623.72	-2630.53	-4745.94	0.00	443555.62	757162.32	N 32 13 0.13 W 103 38	7.54
	13600.00	89.87	179.55	13045.19	2723.72	-2730.53	-4844.76	0.00	443469.13	757162.64	N 32 12 59.14 W 103 38	7.54
	13700.00	89.87	179.55	13124.03	2823.72	-2830.52	-4943.58	0.00	443382.64	757162.96	N 32 12 58.15 W 103 38	7.53
	13800.00	89.87	179.55	13202.87	2923.72	-2930.52	-5042.40	0.00	443296.15	757163.28	N 32 12 57.16 W 103 38	7.53
	13900.00	89.87	179.55	13281.71	3023.72	-3030.52	-5141.22	0.00	443209.66	757163.60	N 32 12 56	

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

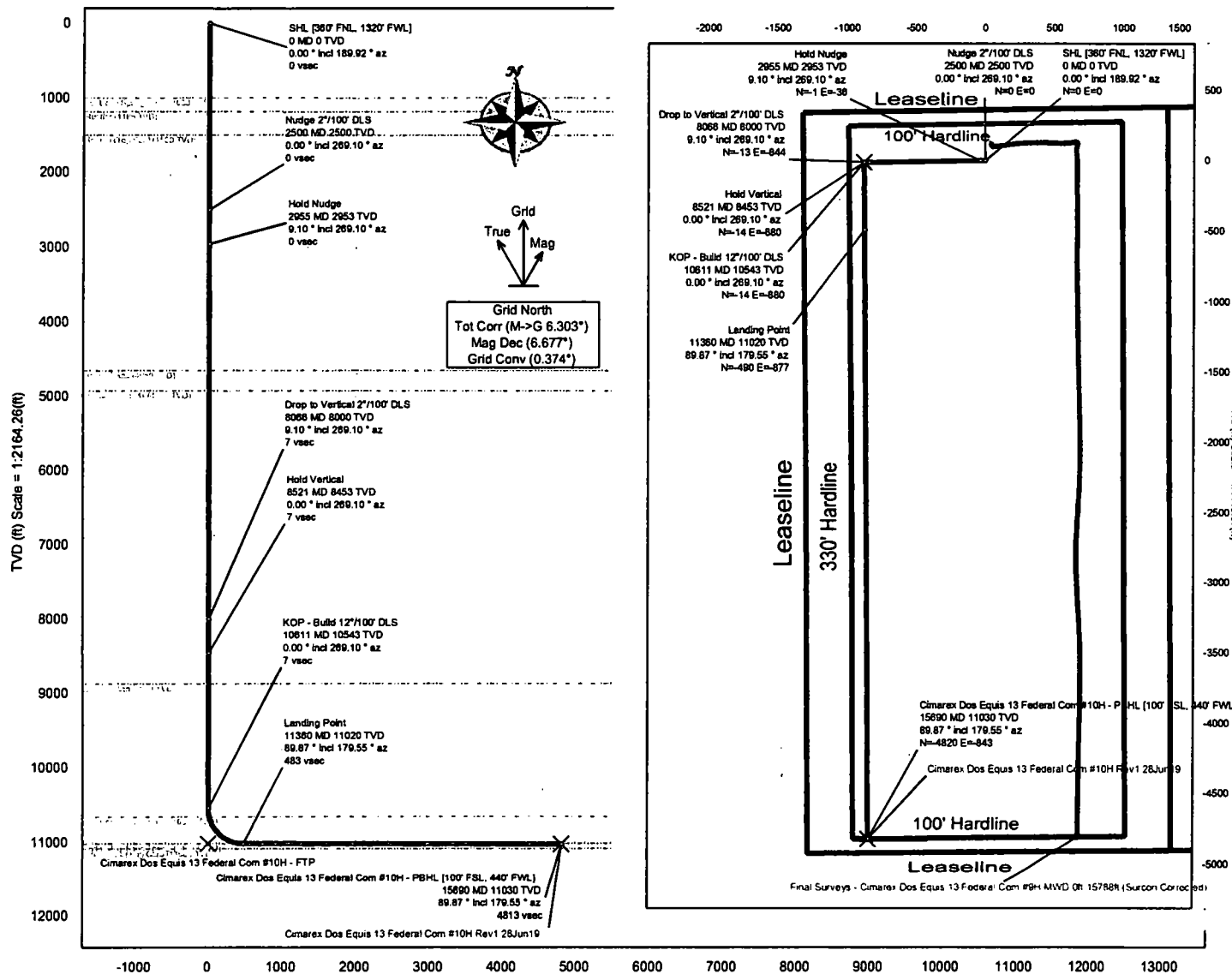
Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
 Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	28.000	1/100.000	30.000	30.000		NAL_MWD_IFR1+MS-Depth Only	Original Borehole / Cimarex Dos Equis 13 Federal Com #10H Rev1 28Jun19
	1	28.000	15689.702	1/100.000	30.000	30.000		NAL_MWD_IFR1+MS	Original Borehole / Cimarex Dos Equis 13 Federal Com #10H Rev1

Borehole:	Well:	Field:	Structure:
Original Borehole	Cimarex Dos Equis 13 Federal Com #10H	NM Lea County (NAD 83)	Cimarex Dos Equis 13 Federal Com #10H

Gravity & Magnetic Parameters	Surface Location	Miscellaneous
Model: HDGM 2019 Dip: 59.853° Date: 28-Jun-2019	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Equips 13
MagDec: 8.677° FS: 47396.833mT Gravity FS: 998.433m/s (9.80665 Based)	Lat: N 32 13 26.11 Northing: 445902.48RUS Grid Conv: 0.3737°	Equips 13
	Lon: W 103 57 57.33 Easting: 75803.177RUS Scale Fact: 0.99994287	Federal Com #10H
		Plan: Cimarex Dos Equis 13 Federal Com #10H Rev1 28Jun19

EW (ft) Scale = 1:1143.67(R)



Vertical Section (ft) Azim = 179.55° Scale = 1:2164.26(R) Origin = 0N/-S, 0E/-W

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [380' FNL, 1320' FWL]	0.00	0.00	189.92	0.00	0.00	0.00	0.00	
1st Bone Spring Sand	1000.00	0.00	269.10	1000.00	0.00	0.00	0.00	0.00
Rustler	1185.00	0.00	269.10	1185.00	0.00	0.00	0.00	0.00
Salado (Top Salt)	1500.00	0.00	269.10	1500.00	0.00	0.00	0.00	0.00
Nudge 2°/100' DLS	2500.00	0.00	269.10	2500.00	0.00	0.00	0.00	0.00
Hold Nudge	2954.94	9.10	269.10	2953.03	0.28	-0.57	-38.04	2.00
Base of Salt	4673.53	9.10	269.10	4650.00	2.42	-4.83	-307.78	0.00
Delaware Sands	4946.97	9.10	269.10	4820.00	2.76	-5.51	-351.02	0.00
Drop to Vertical 2°/100' DLS	8066.22	9.10	269.10	8000.00	6.84	-13.25	-844.22	0.00
Hold Vertical	8521.16	0.00	269.10	8453.03	6.82	-13.62	-880.26	2.00
Bone Spring	8938.13	0.00	269.10	8870.00	6.82	-13.62	-880.26	0.00
KOP - Build 12°/100' DLS	10610.67	0.00	269.10	10542.54	6.82	-13.82	-880.26	0.00
2nd Bone Spring Sand	10729.35	14.24	179.55	10680.00	21.60	-28.49	-880.15	12.00
Landing Point	11359.57	89.87	179.55	11020.00	483.28	-490.17	-876.52	12.00
2nd BSPG Sand Target	11359.59	89.87	179.55	11020.00	483.30	-490.19	-876.52	0.00
Cimarex Dos Equis 13 Federal Com #10H - PBHL [100' FSL, 440' FWL]	15689.70	89.87	179.55	11030.00	4813.41	-4820.16	-842.55	0.00
3rd Bone Spring Carb	NaN			11090.00				

Cimarex Dos Equis 13 Federal Com #10H Rev1 28Jun19 Anti-Collision Summary Report

Analysis Date-24hr Time: June 28, 2019 - 10:30

Client: Cimarex

Field: NM Lea County (NAD 83)

Structure: Cimarex Dos Equis 13 Federal Com #10H

Slot: Cimarex Dos Equis 13 Federal Com #10H

Well: Cimarex Dos Equis 13 Federal Com #10H

Borehole: Original Borehole

Scan MD Range: 0.00ft - 15689.70ft

Analysis Method:

Reference Trajectory:

Depth Interval:

Rule Set:

Min Pts:

Version / Patch:

Database / Project:

3D Least Distance

Cimarex Dos Equis 13 Federal Com #10H Rev1 28Jun19 (Def Plan)

Every 10.00 Measured Depth (ft)

NAL Procedure: D&M AntiCollision Standard S002

All local minima indicated.

2.10.760.0

US1153APP452.dir.slb.com/drilling-NM Lea County 2.10

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

Offset Trajectories Summary

Offset Selection Criteria

Wellhead distance scan:

Selection filters:

Not performed!

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			Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	CI-CI (ft)	MAS (ft)	EOU (ft)			MD (ft)	TVD (ft)	Alert	Minor	Major		

Results Highlighted: Sep-Factor separation <= 1.50 ft

Final Surveys - Cimarex Dos

Equis 13 Federal Com #10H

MWD DR-15788ft (Surcon

Corrected) (Def Survey)

123.70	32.81	121.89	90.89	N/A	MAS = 10.00 (m)	0.00	0.00					Surface
123.70	32.81	121.89	90.89	28834.84	MAS = 10.00 (m)	26.00	26.00					WRP
122.45	32.81	117.49	89.05	38.11	MAS = 10.00 (m)	710.00	710.00					MinPts
122.44	32.81	116.75	89.84	31.05	MAS = 10.00 (m)	890.00	890.00					MinPts
122.90	32.81	115.84	90.09	23.09	MAS = 10.00 (m)	1190.00	1190.00					MINPT-O-EQU
125.74	32.81	118.81	92.83	17.04	MAS = 10.00 (m)	1680.00	1680.00					MINPT-O-EQU
131.03	32.81	119.17	98.22	12.88	MAS = 10.00 (m)	2230.00	2230.00					MINPT-O-EQU
131.45	32.81	118.84	95.57	11.81	MAS = 10.00 (m)	2520.00	2520.00					MinPts
131.62	32.81	118.81	98.71	11.75	MAS = 10.00 (m)	2550.00	2550.00					MINPT-O-EQU
131.89	32.81	119.07	99.08	11.80	MAS = 10.00 (m)	2600.00	2599.98					MinPts-O-SF
1455.03	43.86	1425.88	1411.77	51.54	OSF1.50	8580.00	8511.87					MinPts-O-SF
1489.58	45.91	1488.95	1453.00	60.80	OSF1.50	9000.00	8931.87					MinPts-O-SF
1542.95	49.47	1509.48	1493.45	48.24	OSF1.50	9620.00	9751.87					MinPts
1545.85	53.10	1509.93	1492.74	44.83	OSF1.50	10700.00	10631.35					MinPts-O-SF
1542.82	52.70	1507.17	1490.12	45.19	OSF1.50	10700.00	10717.88					MinPts-O-ADP
1542.77	52.05	1507.10	1490.13	45.24	OSF1.50	10800.00	10728.94					MinPts
1544.69	52.82	1509.09	1492.06	45.32	OSF1.50	10840.00	10848.37					MinPts-O-SF
1543.23	52.44	1507.76	1490.79	45.44	OSF1.50	11050.00	10822.45					MinPts-CICI
1543.23	52.44	1507.76	1490.79	45.43	OSF1.50	11060.00	10828.42					MINPT-O-EQU
1543.24	52.45	1507.76	1490.79	45.43	OSF1.50	11070.00	10834.22					MinPts-O-ADP
1538.02	58.02	1499.57	1481.11	41.62	OSF1.50	11870.00	11020.72					MinPts-CICI
1538.59	58.30	1499.21	1480.29	40.82	OSF1.50	11790.00	11020.99					MINPT-O-EQU
1539.07	58.88	1499.30	1480.10	40.22	OSF1.50	11840.00	11021.11					MinPts-O-ADP
1541.18	61.80	1499.69	1479.57	38.45	OSF1.50	12040.00	11021.57					MINPT-O-EQU
1542.87	65.04	1499.00	1477.83	36.41	OSF1.50	12240.00	11022.03					MINPT-O-EQU
1544.98	68.23	1498.95	1478.73	34.71	OSF1.50	12420.00	11022.45					MINPT-O-EQU
1547.02	71.97	1498.53	1476.08	32.92	OSF1.50	12810.00	11022.89					MINPT-O-EQU
1547.84	73.07	1498.72	1474.88	32.43	OSF1.50	12870.00	11023.03					MinPts-O-ADP
1517.58	96.03	1451.71	1419.55	23.57	OSF1.50	13700.00	11025.40					MinPts-CICI
1517.78	98.09	1451.45	1419.08	23.41	OSF1.50	13740.00	11025.50					MINPT-O-EQU
1518.03	99.01	1451.51	1419.02	23.34	OSF1.50	13780.00	11025.54					MinPts-O-ADP
1518.31	152.70	1414.00	1363.81	15.03	OSF1.50	15689.70	11030.00					MinPts

Cimarex Dos Equis 13 Federal

#10H XEM - MWD DR to 15311

(Def Survey)

1888.07	32.81	1883.57	1853.28	N/A	MAS = 10.00 (m)	0.00	0.00					Surface
1885.94	32.81	1883.42	1853.13	104324.80	MAS = 10.00 (m)	10.00	10.00					MinPts-O-SF
1885.84	32.81	1883.33	1853.03	223529.67	MAS = 10.00 (m)	26.00	26.00					WRP
1873.23	32.81	1857.58	1840.42	142.35	MAS = 10.00 (m)	2530.00	2530.00					MinPts
1873.27	32.81	1857.58	1840.40	141.81	MAS = 10.00 (m)	2540.00	2540.00					MINPT-O-EQU
1875.50	32.81	1859.48	1842.69	138.58	MAS = 10.00 (m)	2640.00	2639.94					MinPts-O-SF
1901.90	32.81	1885.85	1869.09	138.15	MAS = 10.00 (m)	2930.00	2928.39					MinPts-O-SF
1945.28	32.81	1928.56	1912.47	136.85	MAS = 10.00 (m)	3220.00	3214.78					MinPts-O-SF
1981.08	32.81	1974.01	1958.25	136.70	MAS = 10.00 (m)	3520.00	3510.98					MinPts-O-SF
2141.12	32.81	2122.32	2108.31	131.22	MAS = 10.00 (m)	4430.00	4408.53					MinPts-O-SF
2776.51	47.91	2743.93	2728.00	82.24	OSF1.50	8100.00	8033.38					MinPts-O-SF
2777.15	82.48	2741.33	2724.87	83.27	OSF1.50	10580.00	10521.87					MinPts-CICI
2777.17	82.65	2741.30	2724.81	83.19	OSF1.50	10610.00	10542.54					MinPts
2785.61	91.92	2750.06	2733.59	84.47	OSF1.50	10880.00	10808.20					MinPts-O-SF
2840.28	90.83	2708.89	2779.45	72.68	OSF1.50	11810.00	11020.58					MinPts
2840.80	191.65	2718.20	2655.15	22.66	OSF1.50	14130.00	11028.40					MinPts-CICI
2848.74	197.53	2714.22	2649.21	21.88	OSF1.50	14240.00	11028.65					MinPts-CICI
2865.29	242.76	2702.60	2622.50	17.87	OSF1.50	15140.00	11028.73					MINPT-O-EQU
2871.77	254.49	2701.20	2617.29	17.08	OSF1.50	15350.00	11029.22					MINPT-O-EQU
2875.94	259.41	2702.18	2616.53	16.78	OSF1.50	15470.00	11029.49					MinPts-O-ADP
2879.68	292.00	2683.58	2586.76	14.88	OSF1.50	15580.00	11029.70					MinPts
2888.27	292.06	2682.12	2585.30	14.90	OSF1.50	15689.70	11030.00					TD

Cimarex Dos Equis 13 Federal

#10H BT01 XEM-MWD DR to

15250ft (Def Survey)

3303.44	32.81	3300.94	3270.63	N/A	MAS = 10.00 (m)	0.00	0.00					Surface
3303.22	32.81	3300.70	3270.41	122438.72	MAS = 10.00 (m)	20.00	20.00					MinPts-O-SF
3303.18	32.81	3300.66	3270.37	123180.18	MAS = 10.00 (m)	26.00	26.00					WRP
3303.13	32.81	3300.67	3270.32	81877.53	MAS = 10.00 (m)	50.00	50.00					MinPts
3303.16	32.81	3300.54	3270.35	27329.25	MAS = 10.00 (m)	80.00	80.00					MINPT-O-EQU
3303.30	32.81	3300.53	3270.49	12363.39	MAS = 10.00 (m)	120.00	120.00					MINPT-O-EQU
3305.03	32.81	3298.01	3272.22	731.05	MAS = 10.00 (m)	1070.00	1070.00					MinPts
3303.84	32.81	3293.05	3271.03	398.08	MAS = 10.00 (m)	1910.00	1910.00					MinPts
3302.66	32.81	3289.28	3269.85	303.32	MAS = 10.00 (m)	2510.00	2510.00					MinPts
3305.19	32.81	3291.01	3272.34	298.13	MAS = 10.00 (m)	2830.00	2828.96					MinPts-O-SF
4215.80	48.05	4184.27	4169.78	145.12	OSF1.50	8066.22	8000.00					MinPts-O-SF

Offset Trajectory	Separation			Allow	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	CI-CI (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
4198.57	51.28	4183.55	4147.20	129.02		OSF1.50	10810.87	10542.54				MinPI-O-SF	
4198.13	51.24	4183.14	4146.80	129.12		OSF1.50	10880.00	10611.62				MinPb	
4198.13	51.23	4183.14	4146.80	129.14		OSF1.50	10860.00	10621.50				MinPI-CICI	
4200.30	50.03	4185.51	4149.37	130.00		OSF1.50	10910.00	10822.84				MinPb	
4184.05	69.24	4137.67	4115.72	94.00		OSF1.50	11720.00	11020.83				MinPI-CICI	
4185.62	71.10	4137.39	4114.52	91.47		OSF1.50	11820.00	11021.06				MINPT-O-EQU	
4186.43	72.08	4137.54	4114.35	90.19		OSF1.50	11870.00	11021.18				MinPI-O-ADP	
4186.18	121.58	4104.29	4064.00	52.70		OSF1.50	12870.00	11023.48				MinPI-CICI	
4193.10	136.76	4089.15	4053.40	45.80		OSF1.50	13330.00	11024.55				MINPT-O-EQU	
4195.02	142.39	4089.20	4052.83	44.95		OSF1.50	13360.00	11024.69				MinPI-O-ADP	
4199.81	213.24	4056.82	3986.57	29.87		OSF1.50	14800.00	11027.48				MinPI-CICI	
4198.77	307.32	3983.06	3891.46	20.85		OSF1.50	15420.00	11028.38				MinPI-CICI	
4198.70	307.37	3983.05	3891.42	20.85		OSF1.50	15430.00	11028.40				MINPT-O-EQU	
4198.84	307.42	3983.06	3891.42	20.84		OSF1.50	15440.00	11028.42				MinPI-O-ADP	
4201.58	307.91	3995.45	3893.65	20.62		OSF1.50	15670.00	11028.72				MinPI-O-SF	
4207.81	308.12	4001.37	3899.50	20.64		OSF1.50	15689.70	11030.00				TD	

Cimarex Dos Equis 13 Federal
 #10H Prod Hole Extreme Off to
 11400ft (Def Survey)

												Pass
3303.44	32.81	3300.94	3270.83	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
3303.22	32.81	3300.70	3270.41	122438.72		MAS = 10.00 (m)	20.00	20.00				MinPI-O-SF
3303.18	32.81	3300.86	3270.37	123180.18		MAS = 10.00 (m)	28.00	28.00				WRP
3303.13	32.81	3300.67	3270.32	81677.63		MAS = 10.00 (m)	50.00	50.00				MinPb
3303.16	32.81	3300.54	3270.35	27329.25		MAS = 10.00 (m)	80.00	80.00				MINPT-O-EQU
3303.30	32.81	3300.53	3270.40	12363.39		MAS = 10.00 (m)	120.00	120.00				MINPT-O-EQU
3305.03	32.81	3298.01	3272.22	731.08		MAS = 10.00 (m)	1070.00	1070.00				MinPb
3303.84	32.81	3293.05	3271.03	396.08		MAS = 10.00 (m)	1910.00	1910.00				MinPb
3302.86	32.81	3289.28	3269.65	303.32		MAS = 10.00 (m)	2510.00	2510.00				MinPb
3305.19	32.81	3291.81	3272.36	298.13		MAS = 10.00 (m)	2630.00	2629.96				MinPI-O-SF
4215.80	48.05	4184.27	4189.75	145.12		OSF1.50	8086.22	8000.00				MinPI-O-SF
4198.88	51.24	4183.89	4147.84	129.18		OSF1.50	10810.87	10542.54				MinPI-O-SF
4196.84	50.43	4182.16	4146.20	131.25		OSF1.50	10880.00	10797.81				MinPI-O-ADP
4196.80	50.39	4182.17	4146.21	131.38		OSF1.50	10890.00	10808.20				MINPT-O-EQU
4196.55	50.28	4182.21	4146.20	131.72		OSF1.50	10920.00	10830.68				MinPI-CICI
4334.39	49.76	4300.39	4284.85	137.52		OSF1.50	12020.00	11021.53				MinPI-O-SF
4386.25	50.07	4332.03	4318.18	137.59		OSF1.50	12140.00	11021.80				MinPI-O-SF
4398.13	50.42	4363.88	4347.71	137.60		OSF1.50	12250.00	11022.06				MinPI-O-SF
4435.76	50.84	4401.02	4384.91	137.67		OSF1.50	12370.00	11022.33				MinPI-O-SF
4472.79	51.27	4437.78	4421.52	137.50		OSF1.50	12480.00	11022.59				MinPI-O-SF
4512.20	51.73	4478.89	4460.48	137.42		OSF1.50	12590.00	11022.84				MinPI-O-SF
4874.58	53.63	4837.99	4820.95	137.05		OSF1.50	12990.00	11023.77				MinPI-O-SF
4715.03	54.10	4878.13	4860.83	136.89		OSF1.50	13080.00	11023.97				MinPI-O-SF
4756.83	54.57	4719.81	4702.25	136.65		OSF1.50	13170.00	11024.18				MinPI-O-SF
4798.93	55.05	4762.42	4744.90	136.84		OSF1.50	13280.00	11024.39				MinPI-O-SF
4839.37	55.48	4801.55	4783.89	136.94		OSF1.50	13340.00	11024.57				MinPI-O-SF
4874.87	55.86	4836.80	4818.81	136.97		OSF1.50	13410.00	11024.74				MinPI-O-SF
8347.19	66.84	8301.80	8280.35	147.81		OSF1.50	15689.70	11030.00				TD