

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTNMOCD
ArtesiaFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do 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 ☐ Other		5. Lease Serial No. NMNM114350
2. Name of Operator CIMAREX ENERGY COMPANY OF CO		6. If Indian, Allottee or Tribe Name
Contact: ARICKA EASTERLING E-Mail: aeasterling@cimarex.com		7. If Unit or CA/Agreement, Name and/or No.
3a. Address 202 S CHEYENNE AVE SUITE 1000 TULSA, OK 74103.4346	3b. Phone No. (include area code) Ph: 918-560-7060	8. Well Name and No. MEDWICK 32 FEDERAL COM 7H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 32 T26S R27E Lot 2 0290FSL 2050FEL 32.000218 N Lat, 104.123535 W Lon		9. API Well No. 30-015-42172-00-X1
		10. Field and Pool or Exploratory Area WILDCAT
		11. County or Parish, State EDDY COUNTY, NM

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 request approval to change the original drilling plan for the above referenced well. Cimarex proposes to change the BHL there by changing the directional plan. No additional disturbance is required. Please see attached drilling plan, directional plan and plat.

Approved:
BHL: 330 FNL & 2660 FEL Sec 29-26S-27E
Proposed
BHL: 330 FNL & 2590 FWL Sec 29-26S-27E

NM OIL CONSERVATION
ARTESIA DISTRICT

JAN 03 2017

RECEIVED

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL***[Handwritten signature]*

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #360603 verified by the BLM Well Information System For CIMAREX ENERGY COMPANY OF CO, sent to the Carlsbad Committed to AFMSS for processing by JENNIFER SANCHEZ on 12/12/2016 (17JAS0040SE)	
Name (Printed/Typed) ARICKA EASTERLING	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 12/12/2016
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved By	Title
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
DEC 12 2016 BUREAU OF LAND MANAGEMENT CARLSBAD FIELD 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 ****

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-42172		² Pool Code		³ Pool Name Wildcat; Bone Spring	
⁴ Property Code		⁵ Property Name MEDWICK 32 FEDERAL COM			⁶ Well Number 7H
⁷ OGRID No. 215099		⁸ Operator Name CIMAREX ENERGY CO.			⁹ Elevation 3192'

¹⁰ Surface Location

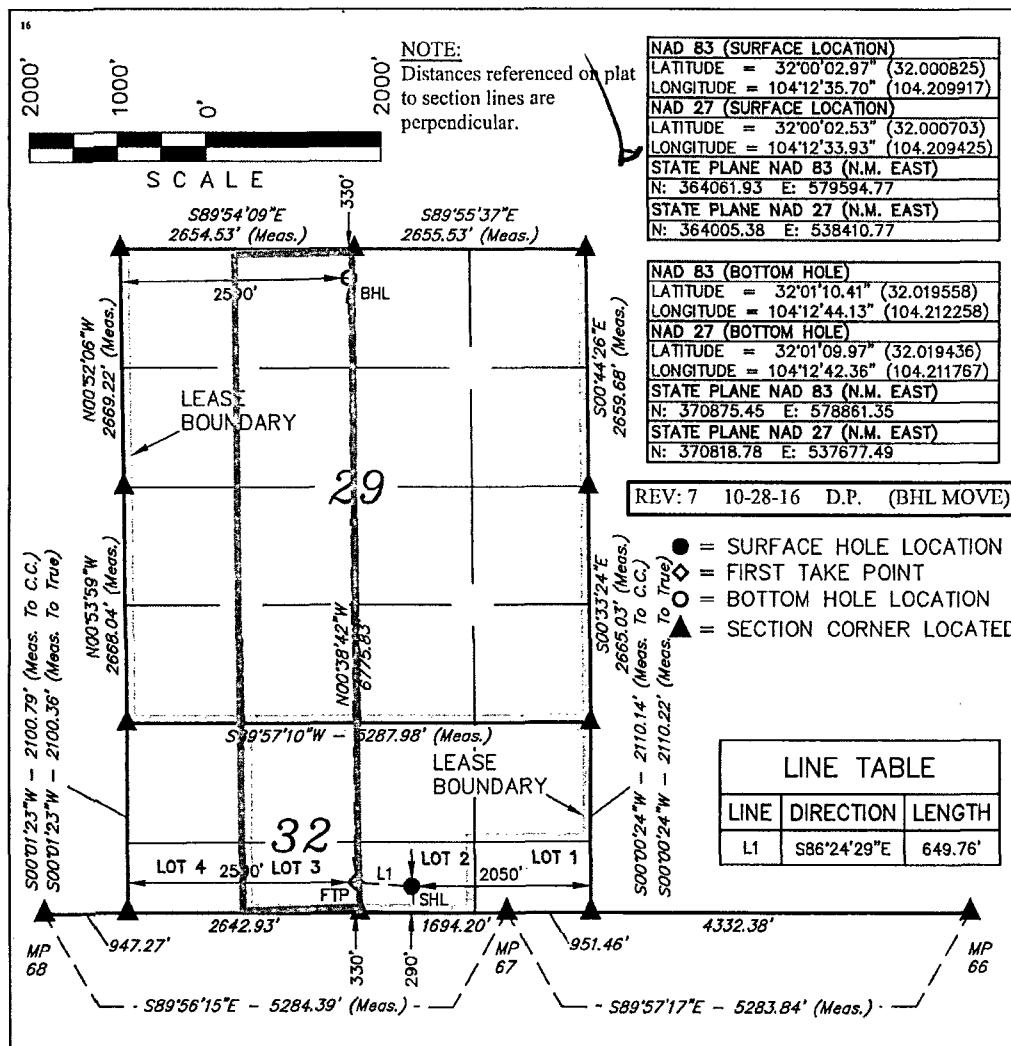
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	32	26S	27E		290	SOUTH	2050	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	29	26S	27E		330	NORTH	2590	WEST	EDDY

¹² Dedicated Acres 223.23	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Aricka Easterling 11/21/16
Signature Date

Aricka Easterling
Printed Name

aeasterling@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.

September 4, 2013

Date of Survey
Signature and Seal of Professional Surveyor:



Certificate Number:

1. Geological Formations

TVD of target 7,380
MD at TD 14,258

Pilot Hole TD N/A
Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
OSE Ground Water	100	N/A	
Salado	1230	N/A	
Castille	1778	N/A	
Bell Canyon	1985	N/A	
Cherry Canyon	2965	N/A	
Brushy Canyon	4090	N/A	
Brushy Canyon Lower	5380	N/A	
Bone Spring	5530	Hydrocarbons	
Bone Spring A Shale	5755	Hydrocarbons	
Bone Spring C Shale	6185	Hydrocarbons	
1st Bone Spring Ss	6460	Hydrocarbons	
2nd Bone Spring Ss	6918	Hydrocarbons	
2nd BS Ss Horz target	7400	Hydrocarbons	
3rd Bone Spring Ss	7460	Hydrocarbons	

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	400	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	4.04	9.45	16.77
12 1/4	0	1936	9-5/8"	36.00	J-55	LT&C	1.97	3.43	6.50
8 3/4	0	6881	5-1/2"	17.00	L-80	LT&C	1.91	2.35	2.69
8 3/4	6881	14258	5-1/2"	17.00	L-80	BT&C	1.78	2.19	46.80
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

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

Cimarex Energy Co., Medwick 32 Federal Com #7H

	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

3. Cementing Program

Casing	# Sks	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	61	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	195	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	368	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	113	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	688	10.80	2.35	9.60	17:43	Lead: Tuned Light I Class H
	1577	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	31
Intermediate	0	44
Production	1736	16

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	X	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 400'	FW Spud Mud	8.30 - 8.80	28	N/C
400' to 1936'	Brine Water	9.70 - 10.20	30-32	N/C
1936' to 14258'	FW/Cut Brine	8.70 - 9.20	30-32	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	3530 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

Cimarex Medwick 32 Federal #7H Rev4 OPB 3Nov16 Proposal Report

(Non-Def Plan)

Report Date: November 03, 2016 - 03:08 PM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Medwick 32 Federal #7H / Cimarex Medwick 32 Federal #7H
Well: Cimarex Medwick 32 Federal #7H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Medwick 32 Federal #7H Rev4 OPB 3Nov16
Survey Date: September 25, 2013
Tort / AHD / DDI / ERD Ratio: 106.351° / 7651.634 ft / 6.197 / 1.037
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 0' 2.97450", W 104° 12' 35.70109"
Location Grid N/E Y/X: N 364061.930 ftUS, E 579594.770 ftUS
CRS Grid Convergence Angle: 0.0654°
Grid Scale Factor: 0.99991077
Version / Patch: 2.10.254.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 354.344° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: Ground Level
TVD Reference Elevation: 3192.000 ft above MSL
Seabed / Ground Elevation: 3192.000 ft above MSL
Magnetic Declination: 7.468°
Total Gravity Field Strength: 998.6854mgm (9.80665 Based)
Gravity Model: DOX
Total Magnetic Field Strength: 48047.673 nT
Magnetic Dip Angle: 59.701°
Declination Date: August 25, 2016
Magnetic Declination Model: HDGM 2016
North Reference: Grid North
Grid Convergence Used: 0.0654°
Total Corr Mag North->Grid North: 7.4031°
Local Coord Referenced To: Structure Reference Point

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 (290' FSL, 2050' FEL)	0.00	0.00	268.00	0.00	0.00	0.00	0.00	N/A	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	100.00	0.00	244.50	100.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	200.00	0.00	244.50	200.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	300.00	0.00	244.50	300.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	400.00	0.00	244.50	400.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	500.00	0.00	244.50	500.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	600.00	0.00	244.50	600.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	700.00	0.00	244.50	700.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	800.00	0.00	244.50	800.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	900.00	0.00	244.50	900.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	1000.00	0.00	244.50	1000.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	1100.00	0.00	244.50	1100.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	1200.00	0.00	244.50	1200.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	1300.00	0.00	244.50	1300.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	1400.00	0.00	244.50	1400.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	1500.00	0.00	244.50	1500.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	1600.00	0.00	244.50	1600.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	1700.00	0.00	244.50	1700.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	1800.00	0.00	244.50	1800.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	1900.00	0.00	244.50	1900.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	2000.00	0.00	244.50	2000.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	2100.00	0.00	244.50	2100.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	2200.00	0.00	244.50	2200.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	2300.00	0.00	244.50	2300.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	2400.00	0.00	244.50	2400.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	2500.00	0.00	244.50	2500.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70

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 ° ' '')
	2600.00	0.00	244.50	2600.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97 W 104 12 35.70	
	2700.00	0.00	244.50	2700.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97 W 104 12 35.70	
	2800.00	0.00	244.50	2800.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97 W 104 12 35.70	
	2900.00	0.00	244.50	2900.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97 W 104 12 35.70	
	3000.00	0.00	244.50	3000.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97 W 104 12 35.70	
	3100.00	0.00	244.50	3100.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97 W 104 12 35.70	
	3200.00	0.00	244.50	3200.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97 W 104 12 35.70	
	3300.00	0.00	244.50	3300.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97 W 104 12 35.70	
	3400.00	0.00	244.50	3400.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97 W 104 12 35.70	
	3500.00	0.00	244.50	3500.00	0.00	0.00	0.00	0.00	364061.93	579594.77	N 32 0 2.97 W 104 12 35.70	
Nudge SW	3600.00	2.00	244.50	3599.98	-0.59	-0.75	-1.58	2.00	364061.18	579593.19	N 32 0 2.97 W 104 12 35.72	
	3700.00	4.00	244.50	3699.84	-2.37	-3.00	-6.30	2.00	364058.93	579588.47	N 32 0 2.94 W 104 12 35.77	
	3800.00	6.00	244.50	3799.45	-5.33	-6.76	-14.16	2.00	364055.17	579580.61	N 32 0 2.91 W 104 12 35.87	
	3900.00	8.00	244.50	3898.70	-9.46	-12.00	-25.16	2.00	364049.93	579569.61	N 32 0 2.86 W 104 12 35.99	
Hold nudge to KOP	4000.00	10.00	244.50	3997.47	-14.77	-18.74	-39.28	2.00	364043.19	579555.49	N 32 0 2.79 W 104 12 36.16	
	4100.00	10.00	244.50	4095.95	-20.67	-26.21	-54.96	0.00	364035.72	579539.82	N 32 0 2.72 W 104 12 36.34	
	4200.00	10.00	244.50	4194.43	-26.56	-33.69	-70.63	0.00	364028.24	579524.15	N 32 0 2.64 W 104 12 36.52	
	4300.00	10.00	244.50	4292.91	-32.46	-41.16	-86.30	0.00	364020.77	579508.48	N 32 0 2.57 W 104 12 36.70	
	4400.00	10.00	244.50	4391.39	-38.35	-48.64	-101.98	0.00	364013.29	579492.80	N 32 0 2.49 W 104 12 36.89	
	4500.00	10.00	244.50	4489.87	-44.25	-56.12	-117.65	0.00	364005.82	579477.13	N 32 0 2.42 W 104 12 37.07	
	4600.00	10.00	244.50	4588.35	-50.14	-63.59	-133.32	0.00	363996.34	579461.46	N 32 0 2.35 W 104 12 37.25	
	4700.00	10.00	244.50	4686.83	-56.04	-71.07	-149.00	0.00	363990.87	579445.79	N 32 0 2.27 W 104 12 37.43	
	4800.00	10.00	244.50	4785.31	-61.93	-78.54	-164.67	0.00	363983.39	579430.12	N 32 0 2.20 W 104 12 37.61	
	4900.00	10.00	244.50	4883.79	-67.83	-86.02	-180.34	0.00	363975.92	579414.44	N 32 0 2.13 W 104 12 37.80	
	5000.00	10.00	244.50	4982.27	-73.72	-93.49	-196.02	0.00	363968.44	579398.77	N 32 0 2.05 W 104 12 37.98	
	5100.00	10.00	244.50	5080.75	-79.62	-100.97	-211.69	0.00	363960.97	579383.10	N 32 0 1.98 W 104 12 38.16	
	5200.00	10.00	244.50	5179.23	-85.51	-108.45	-227.36	0.00	363953.49	579367.43	N 32 0 1.90 W 104 12 38.34	
	5300.00	10.00	244.50	5277.72	-91.41	-115.92	-243.03	0.00	363946.02	579351.76	N 32 0 1.83 W 104 12 38.52	
	5400.00	10.00	244.50	5376.20	-97.30	-123.40	-258.71	0.00	363938.54	579336.09	N 32 0 1.76 W 104 12 38.71	
	5500.00	10.00	244.50	5474.68	-103.20	-130.87	-274.38	0.00	363931.07	579320.41	N 32 0 1.68 W 104 12 38.89	
	5600.00	10.00	244.50	5573.16	-109.09	-138.35	-290.05	0.00	363923.59	579304.74	N 32 0 1.61 W 104 12 39.07	
	5700.00	10.00	244.50	5671.64	-114.99	-145.82	-305.73	0.00	363916.12	579289.07	N 32 0 1.53 W 104 12 39.25	
	5800.00	10.00	244.50	5770.12	-120.88	-153.30	-321.40	0.00	363908.64	579273.40	N 32 0 1.46 W 104 12 39.44	
	5900.00	10.00	244.50	5868.60	-126.78	-160.78	-337.07	0.00	363901.17	579257.73	N 32 0 1.39 W 104 12 39.62	
	6000.00	10.00	244.50	5967.08	-132.67	-168.25	-352.75	0.00	363893.69	579242.05	N 32 0 1.31 W 104 12 39.80	
	6100.00	10.00	244.50	6065.56	-138.56	-175.73	-368.42	0.00	363886.22	579226.38	N 32 0 1.24 W 104 12 39.98	
	6200.00	10.00	244.50	6164.04	-144.46	-183.20	-384.09	0.00	363878.74	579210.71	N 32 0 1.17 W 104 12 40.16	
	6300.00	10.00	244.50	6262.52	-150.35	-190.68	-399.77	0.00	363871.27	579195.04	N 32 0 1.09 W 104 12 40.35	
	6400.00	10.00	244.50	6361.00	-156.25	-198.15	-415.44	0.00	363863.79	579179.37	N 32 0 1.02 W 104 12 40.53	
	6500.00	10.00	244.50	6459.48	-162.14	-205.63	-431.11	0.00	363856.32	579163.70	N 32 0 0.94 W 104 12 40.71	
	6600.00	10.00	244.50	6557.97	-168.04	-213.11	-446.79	0.00	363848.84	579148.02	N 32 0 0.87 W 104 12 40.89	
	6700.00	10.00	244.50	6656.45	-173.93	-220.58	-462.46	0.00	363841.37	579132.35	N 32 0 0.80 W 104 12 41.07	
	6800.00	10.00	244.50	6754.93	-179.83	-228.06	-478.13	0.00	363833.89	579116.68	N 32 0 0.72 W 104 12 41.26	
Build @ 12°/100' DLS	6881.51	10.00	244.50	6855.20	-184.63	-234.15	-490.91	0.00	363827.80	579103.91	N 32 0 0.66 W 104 12 41.40	
	6900.00	10.20	257.12	6853.40	-185.38	-235.21	-493.95	12.00	363826.74	579100.86	N 32 0 0.65 W 104 12 41.44	
	7000.00	17.18	300.72	6950.74	-177.71	-229.61	-515.37	12.00	363832.34	579079.45	N 32 0 0.71 W 104 12 41.69	
Build & Turn 12°/100' DLS	7100.00	27.78	315.92	7043.08	-150.59	-205.24	-544.38	12.00	363856.71	579050.44	N 32 0 0.95 W 104 12 42.03	
	7119.86	30.00	317.70	7060.47	-142.98	-198.24	-550.94	12.00	363863.71	579043.88	N 32 0 1.02 W 104 12 42.10	
	7200.00	37.27	329.13	7127.21	-104.86	-162.51	-576.94	12.00	363899.44	579017.88	N 32 0 1.37 W 104 12 42.40	
	7300.00	47.39	338.78	7201.12	-41.78	-101.99	-605.90	12.00	363959.95	578988.92	N 32 0 1.97 W 104 12 42.74	
First Legal Take Point	7400.00	58.09	345.64	7261.63	35.90	-26.30	-629.83	12.00	364035.64	578964.99	N 32 0 2.72 W 104 12 43.02	
	7476.00	66.42	349.84	7296.99	102.65	39.37	-644.00	12.00	364101.30	578950.82	N 32 0 3.37 W 104 12 43.18	
	7500.00	69.07	351.05	7306.08	124.81	61.27	-647.69	12.00	364123.20	578947.14	N 32 0 3.59 W 104 12 43.22	
	7600.00	80.20	355.70	7332.55	221.04	156.89	-658.69	12.00	364218.81	578936.14	N 32 0 4.53 W 104 12 43.35	
Landing Point	7684.41	89.65	359.38	7340.00	304.87	240.78	-662.27	12.00	364302.69	578932.56	N 32 0 5.36 W 104 12 43.39	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N 0° 55' 0" W 104° 12' 43.39")	Longitude (E/W 0° 00' 00")
	7700.00	89.65	359.38	7340.10	320.41	256.37	-662.44	0.00	364318.28	578932.39	N 32 0 55.2 W 104 12 43.39	
	7800.00	89.65	359.38	7340.71	420.02	356.36	-663.52	0.00	364418.26	578931.31	N 32 0 6.51 W 104 12 43.40	
	7900.00	89.65	359.38	7341.32	519.63	456.36	-664.60	0.00	364518.24	578930.23	N 32 0 7.50 W 104 12 43.41	
	8000.00	89.65	359.38	7341.93	619.24	556.35	-665.69	0.00	364618.23	578929.14	N 32 0 8.49 W 104 12 43.42	
	8100.00	89.65	359.38	7342.54	718.86	656.34	-666.77	0.00	364718.21	578928.06	N 32 0 9.48 W 104 12 43.44	
	8200.00	89.65	359.38	7343.15	818.47	756.33	-667.85	0.00	364818.19	578926.98	N 32 0 10.47 W 104 12 43.45	
	8300.00	89.65	359.38	7343.76	918.08	856.32	-668.94	0.00	364918.18	578925.89	N 32 0 11.46 W 104 12 43.46	
	8400.00	89.65	359.38	7344.37	1017.69	956.32	-670.02	0.00	365018.16	578924.81	N 32 0 12.45 W 104 12 43.47	
	8500.00	89.65	359.38	7344.98	1117.30	1056.31	-671.10	0.00	365118.14	578923.73	N 32 0 13.43 W 104 12 43.48	
	8600.00	89.65	359.38	7345.59	1216.92	1156.30	-672.19	0.00	365218.13	578922.64	N 32 0 14.42 W 104 12 43.49	
	8700.00	89.65	359.38	7346.20	1316.53	1256.29	-673.27	0.00	365318.11	578921.56	N 32 0 15.41 W 104 12 43.50	
	8800.00	89.65	359.38	7346.81	1416.14	1356.29	-674.35	0.00	365418.09	578920.48	N 32 0 16.40 W 104 12 43.51	
	8900.00	89.65	359.38	7347.42	1515.75	1456.28	-675.44	0.00	365518.08	578919.39	N 32 0 17.39 W 104 12 43.53	
	9000.00	89.65	359.38	7348.03	1615.37	1556.27	-676.52	0.00	365618.06	578918.31	N 32 0 18.38 W 104 12 43.54	
	9100.00	89.65	359.38	7348.64	1714.98	1656.26	-677.60	0.00	365718.04	578917.23	N 32 0 19.37 W 104 12 43.55	
	9200.00	89.65	359.38	7349.25	1814.59	1756.26	-678.69	0.00	365818.03	578916.14	N 32 0 20.36 W 104 12 43.56	
	9300.00	89.65	359.38	7349.86	1914.20	1856.25	-679.77	0.00	365918.01	578915.06	N 32 0 21.35 W 104 12 43.57	
	9400.00	89.65	359.38	7350.47	2013.81	1956.24	-680.85	0.00	366017.99	578913.98	N 32 0 22.34 W 104 12 43.58	
	9500.00	89.65	359.38	7351.08	2113.43	2056.23	-681.94	0.00	366117.97	578912.89	N 32 0 23.33 W 104 12 43.59	
	9600.00	89.65	359.38	7351.69	2213.04	2156.22	-683.02	0.00	366217.96	578911.81	N 32 0 24.32 W 104 12 43.60	
	9700.00	89.65	359.38	7352.30	2312.65	2256.22	-684.10	0.00	366317.94	578910.73	N 32 0 25.31 W 104 12 43.62	
	9800.00	89.65	359.38	7352.91	2412.26	2356.21	-685.19	0.00	366417.92	578909.65	N 32 0 26.30 W 104 12 43.63	
	9900.00	89.65	359.38	7353.52	2511.88	2456.20	-686.27	0.00	366517.91	578908.56	N 32 0 27.29 W 104 12 43.64	
	10000.00	89.65	359.38	7354.13	2611.49	2556.19	-687.35	0.00	366617.89	578907.48	N 32 0 28.28 W 104 12 43.65	
	10100.00	89.65	359.38	7354.74	2711.10	2656.19	-688.44	0.00	366717.87	578906.40	N 32 0 29.27 W 104 12 43.66	
	10200.00	89.65	359.38	7355.35	2810.71	2756.18	-689.52	0.00	366817.86	578905.31	N 32 0 30.26 W 104 12 43.67	
	10300.00	89.65	359.38	7355.95	2910.33	2856.17	-690.60	0.00	366917.84	578904.23	N 32 0 31.25 W 104 12 43.68	
	10400.00	89.65	359.38	7356.56	3009.94	2956.16	-691.69	0.00	367017.82	578903.15	N 32 0 32.23 W 104 12 43.69	
	10500.00	89.65	359.38	7357.17	3109.55	3056.15	-692.77	0.00	367117.81	578902.06	N 32 0 33.22 W 104 12 43.71	
	10600.00	89.65	359.38	7357.78	3209.16	3156.15	-693.85	0.00	367217.79	578900.98	N 32 0 34.21 W 104 12 43.72	
	10700.00	89.65	359.38	7358.39	3308.77	3256.14	-694.94	0.00	367317.77	578899.90	N 32 0 35.20 W 104 12 43.73	
	10800.00	89.65	359.38	7359.00	3408.39	3356.13	-696.02	0.00	367417.76	578898.81	N 32 0 36.19 W 104 12 43.74	
	10900.00	89.65	359.38	7359.61	3508.00	3456.12	-697.10	0.00	367517.74	578897.73	N 32 0 37.18 W 104 12 43.75	
	11000.00	89.65	359.38	7360.22	3607.61	3556.12	-698.19	0.00	367617.72	578896.65	N 32 0 38.17 W 104 12 43.76	
	11100.00	89.65	359.38	7360.82	3707.22	3656.11	-699.27	0.00	367717.71	578895.56	N 32 0 39.16 W 104 12 43.77	
	11200.00	89.65	359.38	7361.43	3806.84	3756.10	-700.35	0.00	367817.69	578894.48	N 32 0 40.15 W 104 12 43.78	
	11300.00	89.65	359.38	7362.04	3906.45	3856.09	-701.44	0.00	367917.67	578893.40	N 32 0 41.14 W 104 12 43.80	
	11400.00	89.65	359.38	7362.65	4006.06	3956.08	-702.52	0.00	368017.65	578892.31	N 32 0 42.13 W 104 12 43.81	
	11500.00	89.65	359.38	7363.26	4105.67	4056.08	-703.60	0.00	368117.64	578891.23	N 32 0 43.12 W 104 12 43.82	
	11600.00	89.65	359.38	7363.86	4205.29	4156.07	-704.69	0.00	368217.62	578890.15	N 32 0 44.11 W 104 12 43.83	
	11700.00	89.65	359.38	7364.47	4304.90	4256.06	-705.77	0.00	368317.60	578889.06	N 32 0 45.10 W 104 12 43.84	
	11800.00	89.65	359.38	7365.08	4404.51	4356.05	-706.85	0.00	368417.59	578887.98	N 32 0 46.09 W 104 12 43.85	
	11900.00	89.65	359.38	7365.69	4504.12	4456.05	-707.94	0.00	368517.57	578886.90	N 32 0 47.08 W 104 12 43.86	
	12000.00	89.65	359.38	7366.30	4603.73	4556.04	-709.02	0.00	368617.55	578885.81	N 32 0 48.07 W 104 12 43.88	
	12100.00	89.65	359.38	7366.90	4703.35	4656.03	-710.10	0.00	368717.54	578884.73	N 32 0 49.06 W 104 12 43.89	
	12200.00	89.65	359.38	7367.51	4802.97	4756.02	-711.19	0.00	368817.52	578883.65	N 32 0 50.05 W 104 12 43.90	
	12300.00	89.65	359.38	7368.12	4902.57	4856.02	-712.27	0.00	368917.50	578882.56	N 32 0 51.04 W 104 12 43.91	
	12400.00	89.65	359.38	7368.73	5002.18	4956.01	-713.35	0.00	369017.49	578881.48	N 32 0 52.02 W 104 12 43.92	
	12500.00	89.65	359.38	7369.33	5101.80	5056.00	-714.44	0.00	369117.47	578880.40	N 32 0 53.01 W 104 12 43.93	
	12600.00	89.65	359.38	7369.94	5201.41	5155.99	-715.52	0.00	369217.45	578879.31	N 32 0 54.00 W 104 12 43.94	
	12700.00	89.65	359.38	7370.55	5301.02	5255.99	-716.60	0.00	369317.44	578878.23	N 32 0 54.99 W 104 12 43.95	
	12800.00	89.65	359.38	7371.16	5400.63	5355.98	-717.69	0.00	369417.42	578877.15	N 32 0 55.98 W 104 12 43.97	
	12900.00	89.65	359.38	7371.76	5500.25	5455.97	-718.77	0.00	369517.40	578876.06	N 32 0 56.97 W 104 12 43.98	
	13000.00	89.65	359.38	7372.37	5599.86	5555.96	-719.85	0.00	369617.39	578874.98	N 32 0 57.96 W 104 12 43.99	
	13100.00	89.65	359.38	7372.98	5699.47	5655.95	-720.94	0.00	369717.37	578873.90	N 32 0 58.95 W 104 12 44.00	
	13200.00	89.65	359.38	7373.58	5799.08	5755.95	-722.02	0.00	369817.35	578872.81	N 32 0 59.94 W 104 12 44.01	
	13300.00	89.65	359.38	7374.19	5898.69	5855.94	-723.10	0.00	369917.33	578871.73	N 32 1 0.93 W 104 12 44.02	
	13400.00	89.65	359.38	7374.80	5998.31	5955.93	-724.19	0.00	370017.32	578870.65	N 32 1 1.92 W 104 12 44.03	
	13500.00	89.65	359.38	7375.40	6097.92	6055.92	-725.27	0.00	370117.30	578869.56	N 32 1 2.91 W 104 12 44.04	

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 ° ' ")
	13600.00	89.65	359.38	7376.01	6197.53	6155.92	-726.35	0.00	370217.28	578868.48	N 32 1 3.90 W	104 12 44.06
	13700.00	89.65	359.38	7376.62	6297.14	6255.91	-727.44	0.00	370317.27	578867.40	N 32 1 4.89 W	104 12 44.07
	13800.00	89.65	359.38	7377.22	6396.76	6355.90	-728.52	0.00	370417.25	578866.31	N 32 1 5.88 W	104 12 44.08
	13900.00	89.65	359.38	7377.83	6496.37	6455.89	-729.61	0.00	370517.23	578865.23	N 32 1 6.87 W	104 12 44.09
	14000.00	89.65	359.38	7378.43	6595.98	6555.88	-730.69	0.00	370617.22	578864.15	N 32 1 7.86 W	104 12 44.10
	14100.00	89.65	359.38	7379.04	6695.59	6655.88	-731.77	0.00	370717.20	578863.06	N 32 1 8.85 W	104 12 44.11
	14200.00	89.65	359.38	7379.65	6795.21	6755.87	-732.86	0.00	370817.18	578861.98	N 32 1 9.84 W	104 12 44.12

Cimarex
Medwick 32
Federal #7H -
PBHL (330'
FNL, 2590' FEL)

Survey Type:

Non-Def Plan

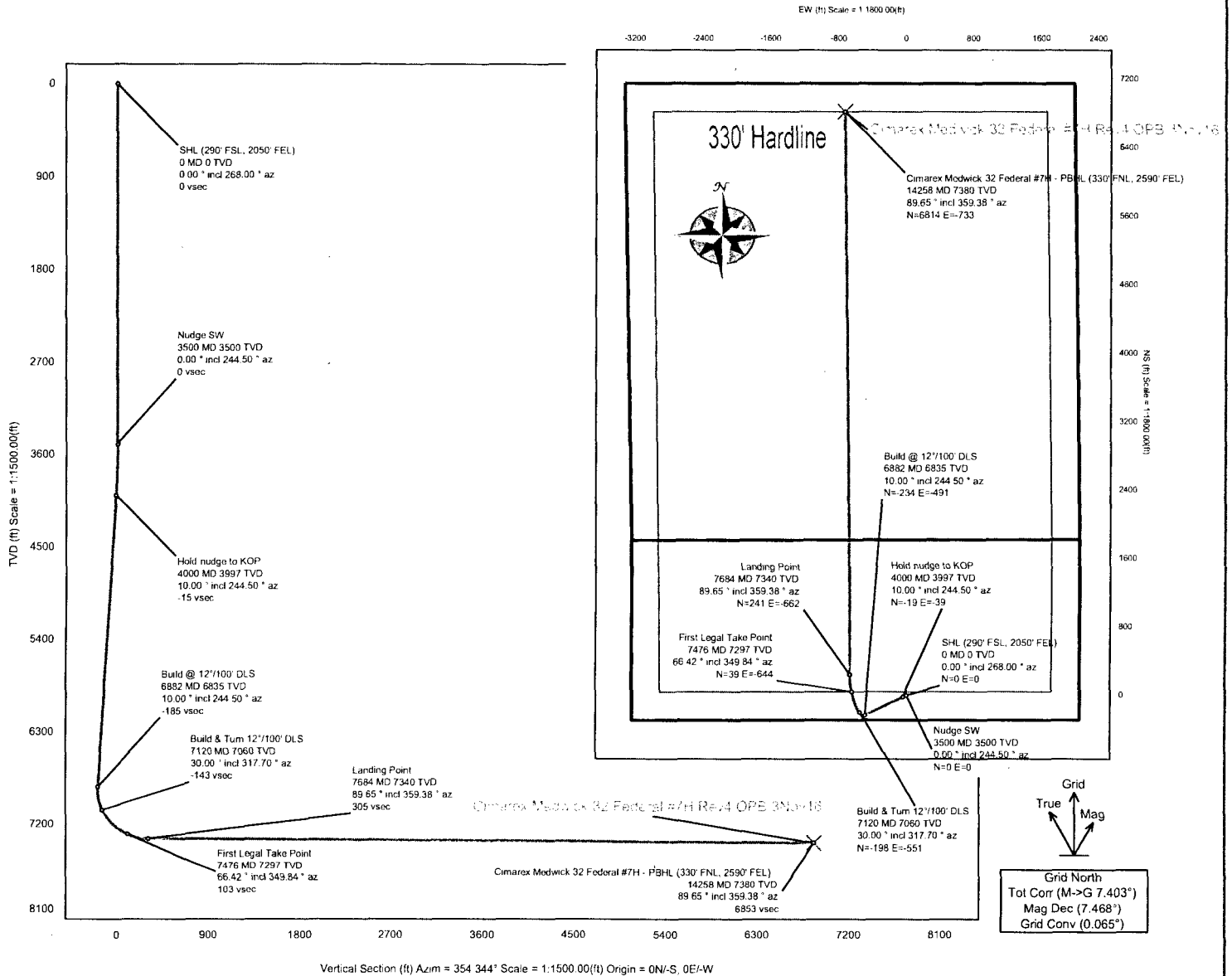
Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

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	14258.277	1/100.000	30.000	30.000		SLB_MWD-STD	Original Borehole / Cimarex Medwick 32 Federal #7H Rev4

Borehole:	Well:	Field:	Structure:
Original Borehole	Medwick 32 Federal #7H	NM Eddy County (NAD 83)	TBD

Gravity & Magnetic Parameters	Surface Location	Miscellaneous
Model: HDGM 2016 Dip: 59.701° Date: 25-Aug-2016	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Medwick 32
MagDec: 7.468° FS: 48047.673nT Gravity FS: 998.885mgm (9.80665 Based)	Lat: N 32 0 2.97 Northing: 364061.93RUS Grid Conv: 0.0654°	Slot: Federal #7H TVD Ref: Ground Level(3192ft above MSL)
	Lon: W 104 12 35.70 Easting: 579594.77RUS Scale Fact: 0.99991077	Plan: Medwick 32 Federal #7H Rev4 OPB 3Nov16



Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL (290' FSL, 2050' FEL)	0.00	0.00	268.00	0.00	0.00	0.00	0.00	
Nudge SW	3500.00	0.00	244.50	3500.00	0.00	0.00	0.00	0.00
Hold nudge to KOP	4000.00	10.00	244.50	3997.47	-14.77	-18.74	-39.28	2.00
Build @ 12°/100' DLS	6881.51	10.00	244.50	6835.20	-184.63	-234.15	-490.91	0.00
Build & Turn 12°/100' DLS	7119.86	30.00	317.70	7060.47	-142.98	-198.24	-550.94	12.00
First Legal Take Point	7476.00	66.42	349.84	7296.99	102.65	39.37	-644.00	12.00
Landing Point	7684.41	89.65	359.38	7340.00	304.87	240.78	-662.27	12.00
Cimarex Medwick 32 Federal #7H - PBHL (330' FNL, 2590' FEL)	14258.28	89.65	359.38	7380.00	6853.26	6814.14	-733.49	0.00

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Cimarex Energy Co. of Colorado
LEASE NO.:	NMNM-114350
WELL NAME & NO.:	Medwick 32 Federal Com 7H
SURFACE HOLE FOOTAGE:	0210' FSL & 2020' FEL
BOTTOM HOLE FOOTAGE:	0660' FNL & 2020' FEL Sec. 29, T. 26 S., R 27 E
LOCATION:	Section 32, T. 26 S., R 27 E., NMPM
COUNTY:	Eddy County, New Mexico

The original COAs still stand with the following drilling modifications:

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, report measured amounts and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The top and bottom of Salt are to be recorded on the Completion Report.

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Water Basin:

After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

High Cave/Karst

Possibility of water flows in the Castile and Delaware.

Possibility of lost circulation in the Salado and Delaware.

Abnormal pressures may be encountered within the 3rd Bone Spring and Wolfcamp formations.

A MINIMUM OF TWO CASING STRINGS CEMENTED TO SURFACE IS REQUIRED IN HIGH CAVE/KARST AREAS. THE CEMENT MUST BE IN A SOLID SHEATH. THEREFORE, ONE INCH OPERATIONS ARE NOT SUFFICIENT TO PROTECT CAVE KARST RESOURCES. A CASING DESIGN THAT HAS A ONE INCH JOB PERFORMED DOES NOT COUNT AS A SOLID SHEATH. IF THE PRIMARY CEMENT JOB ON THE SURFACE CASING DOES NOT CIRCULATE, THEN THE NEXT TWO CASING STRINGS MUST BE CEMENTED TO SURFACE.

1. The **13-3/8** inch surface casing shall be set at approximately **400** feet and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt. Excess calculates to 10% - Additional cement may be required.**
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing, which shall be set at approximately **1936** feet, is:
 - ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

Centralizers approved as written.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
 - ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **Excess calculates to 16% - Additional cement may be required.**

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.
 - a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **3000 (3M)** psi.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
- a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
 - d. The results of the test shall be reported to the appropriate BLM office.
 - e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
 - f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
 - g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **3rd Bone Spring** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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