District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-104
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

# I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

| [1] Operator name and Address | [2] OGRID Number |
|---|---|
| Cimarex Energy Company<br>600 N. Marienfeld St., Suite 600<br>Midland, TX 79701 | 215099 |
| | [3] Reason for Filing Code/ Effective Date<br>NW 5/22/21 |

| [4] API Number | [5] Pool Name | [6] Pool Code |
|---|---|---|
| 30 - 025-46324 | WC-025 G-08 S243213C;Wolfcamp | 98309 |

| [7] Property Code | [8] Property Name | [9] Well Number |
|---|---|---|
| 326056 | Dos Equis 12-13 Federal Com | 86H |

## II. [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 |
|---|---|---|---|---|---|---|---|---|---|
| B | 12 | 24S | 32E | | 360 | North | 1430 | East | Lea |

## [11] Bottom Hole Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| P | 13 | 24S | 32E | | 102 | South | 436 | East | Lea |

| [12] Lse Code | [13] Producing Method Code | [14] Gas Connection Date | [15] C-129 Permit Number | [16] C-129 Effective Date | [17] C-129 Expiration Date |
|---|---|---|---|---|---|
| F | F | 5/22/21 | | | |

## III. Oil and Gas Transporters

| [18] Transporter OGRID | [19] Transporter Name and Address | [20] O/G/W |
|---|---|---|
| 371960 | Lucid Energy Delaware, LLC | G |
| 267255 | Energy Transfer Partners, LP | O |
| | | |
| | | |

## IV. Well Completion Data

| [21] Spud Date | [22] Ready Date | [23] TD | [24] PBTD | [25] Perforations | [26] DHC, MC |
|---|---|---|---|---|---|
| 12/30/19 | 5/22/21 | 22,563MD/ 12,419TVD | 22,547 | 12,645 - 22,522 | |

| [27] Hole Size | [28] Casing & Tubing Size | [29] Depth Set | [30] Sacks Cement |
|---|---|---|---|
| 14-3/4 | 10-3/4 | 1232 | 920 |
| 9-7/8, 8-3/4 | 7-5/8 | 12,713 | 5020 |
| 6-3/4 | 5 | 22,563 | 1420 |
| | Request tubing extension | | |

## V. Well Test Data

| [31] Date New Oil | [32] Gas Delivery Date | [33] Test Date | [34] Test Length | [35] Tbg. Pressure | [36] Csg. Pressure |
|---|---|---|---|---|---|
| 5/22/21 | 5/22/21 | 6/9/21 | 24hrs | | 3223 |
| **[37] Choke Size** | **[38] Oil** | **[39] Water** | **[40] Gas** | | **[41] Test Method** |
| | 1982 | 2134 | 4388 | | Flowing |

[42] I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: Kanicia Schlichting

Printed name: Kanicia Schlichting

Title: Regulatory Analyst

E-mail Address: kschlichting@cimarex.com

Date: 12/09/21

Phone: 432-571-7894

OIL CONSERVATION DIVISION

Approved by: *PATRICIA MARTINEZ*

Title: *PETROLEUM SPECIALIST*

Approval Date: *4/26/2022*

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 | [2] Pool Code | [3] Pool Name |
|---|---|---|
| 30-025-46324 | 98309 | WC-025 G-08 S243213C; Wolfcamp |

| [4] Property Code | [5] Property Name | [6] Well Number |
|---|---|---|
| 326056 | DOS EQUIS 12-13 FEDERAL COM | 86H |

| [7] OGRID No. | [8] Operator Name | [9] Elevation |
|---|---|---|
| 215099 | CIMAREX ENERGY CO. | 3600.4' |

## [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 |
|---|---|---|---|---|---|---|---|---|---|
| B | 12 | 24S | 32E | | 360 | NORTH | 1430 | 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 | 13 | 24S | 32E | | 102 | SOUTH | 436 | EAST | LEA |

| [12] Dedicated Acres | [13] Joint or Infill | [14] Consolidation Code | [15] Order No. |
|---|---|---|---|
| 320 | | | |

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°14'18.49" (32.238470°)
LONGITUDE = 103°37'27.88" (103.624411°)
**NAD 27 (SURFACE HOLE LOCATION)**
LATITUDE = 32°14'18.05" (32.238347°)
LONGITUDE = 103°37'26.15" (103.623931°)
**STATE PLANE NAD 83 (N.M. EAST)**
N: 451212.41' E: 760526.60'
**STATE PLANE NAD 27 (N.M. EAST)**
N: 451153.44' E: 719342.62'

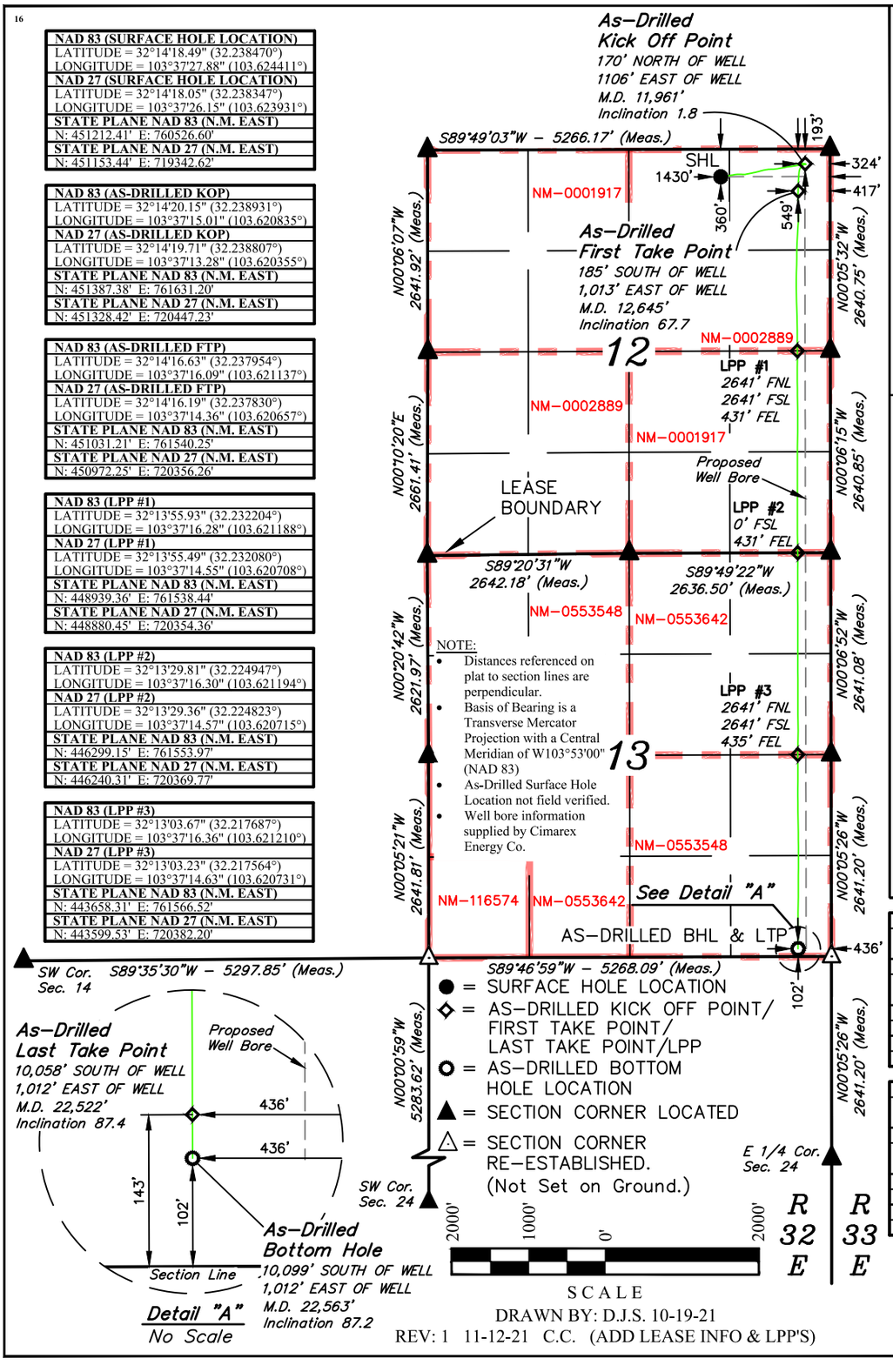
**NAD 83 (AS-DRILLED KOP)**
LATITUDE = 32°14'20.15" (32.238931°)
LONGITUDE = 103°37'15.01" (103.620835°)
**NAD 27 (AS-DRILLED KOP)**
LATITUDE = 32°14'19.71" (32.238807°)
LONGITUDE = 103°37'13.28" (103.620355°)
**STATE PLANE NAD 83 (N.M. EAST)**
N: 451387.38' E: 761631.20'
**STATE PLANE NAD 27 (N.M. EAST)**
N: 451328.42' E: 720447.23'

**NAD 83 (AS-DRILLED FTP)**
LATITUDE = 32°14'16.63" (32.237954°)
LONGITUDE = 103°37'16.09" (103.621137°)
**NAD 27 (AS-DRILLED FTP)**
LATITUDE = 32°14'16.19" (32.237830°)
LONGITUDE = 103°37'14.36" (103.620657°)
**STATE PLANE NAD 83 (N.M. EAST)**
N: 451031.21' E: 761540.25'
**STATE PLANE NAD 27 (N.M. EAST)**
N: 450972.25' E: 720356.26'

**NAD 83 (LPP #1)**
LATITUDE = 32°13'55.93" (32.232204°)
LONGITUDE = 103°37'16.28" (103.621188°)
**NAD 27 (LPP #1)**
LATITUDE = 32°13'55.49" (32.232080°)
LONGITUDE = 103°37'14.55" (103.620708°)
**STATE PLANE NAD 83 (N.M. EAST)**
N: 448939.36' E: 761538.44'
**STATE PLANE NAD 27 (N.M. EAST)**
N: 448880.45' E: 720354.36'

**NAD 83 (LPP #2)**
LATITUDE = 32°13'29.81" (32.224947°)
LONGITUDE = 103°37'16.30" (103.621194°)
**NAD 27 (LPP #2)**
LATITUDE = 32°13'29.36" (32.224823°)
LONGITUDE = 103°37'14.57" (103.620715°)
**STATE PLANE NAD 83 (N.M. EAST)**
N: 446299.15' E: 761553.97'
**STATE PLANE NAD 27 (N.M. EAST)**
N: 446240.31' E: 720369.77'

**NAD 83 (LPP #3)**
LATITUDE = 32°13'03.67" (32.217687°)
LONGITUDE = 103°37'16.36" (103.621210°)
**NAD 27 (LPP #3)**
LATITUDE = 32°13'03.23" (32.217564°)
LONGITUDE = 103°37'14.63" (103.620731°)
**STATE PLANE NAD 83 (N.M. EAST)**
N: 443658.31' E: 761566.52'
**STATE PLANE NAD 27 (N.M. EAST)**
N: 443599.53' E: 720382.20'




DRAWN BY: D.J.S. 10-19-21
REV: 1 11-12-21 C.C. (ADD LEASE INFO & LPP'S)

## [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.*

12/7/21
Signature Date

Kanicia Schlichting
Printed Name

kschlichting@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.*

April 23, 2018
Date of Survey
Signature and Seal of Professional Surveyor:

PAUL BUCHELE
NEW MEXICO
23782
11-12-21
PROFESSIONAL SURVEYOR

Certificate Number:

**NAD 83 (AS-DRILLED LTP)**
LATITUDE = 32°12'38.95" (32.210821°)
LONGITUDE = 103°37'16.39" (103.621219°)
**NAD 27 (AS-DRILLED LTP)**
LATITUDE = 32°12'38.51" (32.210697°)
LONGITUDE = 103°37'14.66" (103.620740°)
**STATE PLANE NAD 83 (N.M. EAST)**
N: 441160.20' E: 761580.41'
**STATE PLANE NAD 27 (N.M. EAST)**
N: 441101.49' E: 720395.97'

**NAD 83 (AS-DRILLED BHL)**
LATITUDE = 32°12'38.55" (32.210708°)
LONGITUDE = 103°37'16.39" (103.621219°)
**NAD 27 (AS-DRILLED BHL)**
LATITUDE = 32°12'38.10" (32.210584°)
LONGITUDE = 103°37'14.66" (103.620740°)
**STATE PLANE NAD 83 (N.M. EAST)**
N: 441119.25' E: 761580.74'
**STATE PLANE NAD 27 (N.M. EAST)**
N: 441060.54' E: 720396.30'

**Project:** Lea County, New Mexico (NAD83)
**Site:** Dos Equis 13 Federal Pad (Grid)
**Well:** Dos Equis 12-13 Federal Com 86H
**Wellbore:** ST01
**Design:** Final Surveys
**Rig:** H&P 380

RKB (H&P 380) 26' + GL(3600.4) @ 3626.40usft

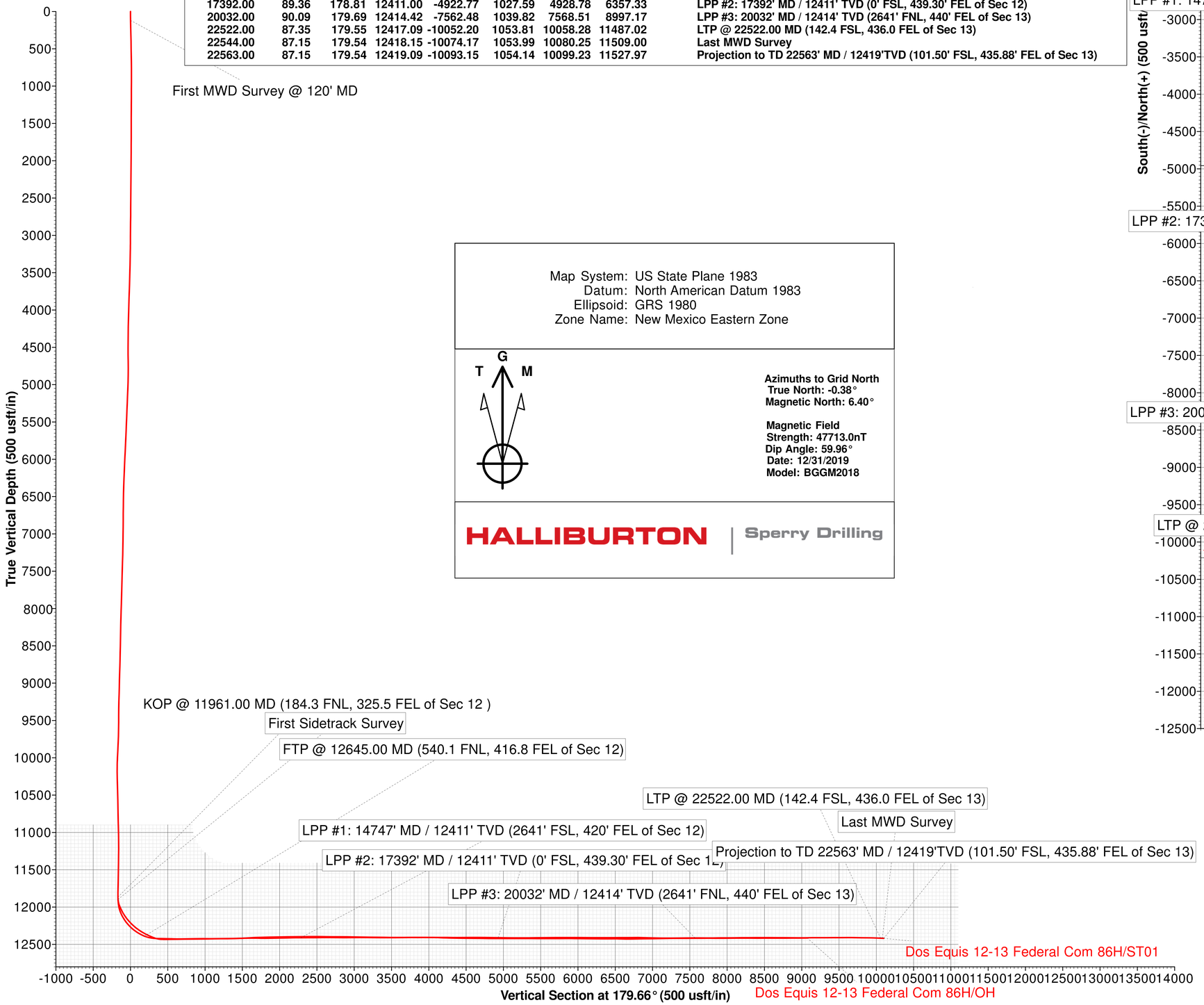
WELL DETAILS

3600.40

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 451212.410 | 760526.600 | 32° 14' 18.492903 N | 103° 37' 27.880863 W |

**ANNOTATIONS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | VSect | Departure | Annotation |
|---|---|---|---|---|---|---|---|---|
| 11992.00 | 4.64 | 218.70 | 11897.60 | 174.03 | 1103.33 | -167.48 | 1226.12 | First Sidetrack Survey |
| 12645.00 | 67.74 | 181.65 | 12389.66 | -181.19 | 1013.65 | 187.21 | 1614.65 | FTP @ 12645.00 MD (540.1 FNL, 416.8 FEL of Sec 12) |
| 14747.00 | 90.16 | 179.21 | 12410.56 | -2278.00 | 1011.90 | 2283.97 | 3712.42 | LPP #1: 14747' MD / 12411' TVD (2641' FSL, 420' FEL of Sec 12) |
| 17392.00 | 89.36 | 178.81 | 12411.00 | -4922.77 | 1027.59 | 4928.78 | 6357.33 | LPP #2: 17392' MD / 12411' TVD (0' FSL, 439.30' FEL of Sec 12) |
| 20032.00 | 90.09 | 179.69 | 12414.42 | -7562.48 | 1039.82 | 7568.51 | 8997.17 | LPP #3: 20032' MD / 12414' TVD (2641' FNL, 440' FEL of Sec 13) |
| 22522.00 | 87.35 | 179.55 | 12417.09 | -10052.20 | 1053.81 | 10058.28 | 11487.02 | LTP @ 22522.00 MD (142.4 FSL, 436.0 FEL of Sec 13) |
| 22544.00 | 87.15 | 179.54 | 12418.15 | -10074.17 | 1053.99 | 10080.25 | 11509.00 | Last MWD Survey |
| 22563.00 | 87.15 | 179.54 | 12419.09 | -10093.15 | 1054.14 | 10099.23 | 11527.97 | Projection to TD 22563' MD / 12419'TVD (101.50' FSL, 435.88' FEL of Sec 13) |



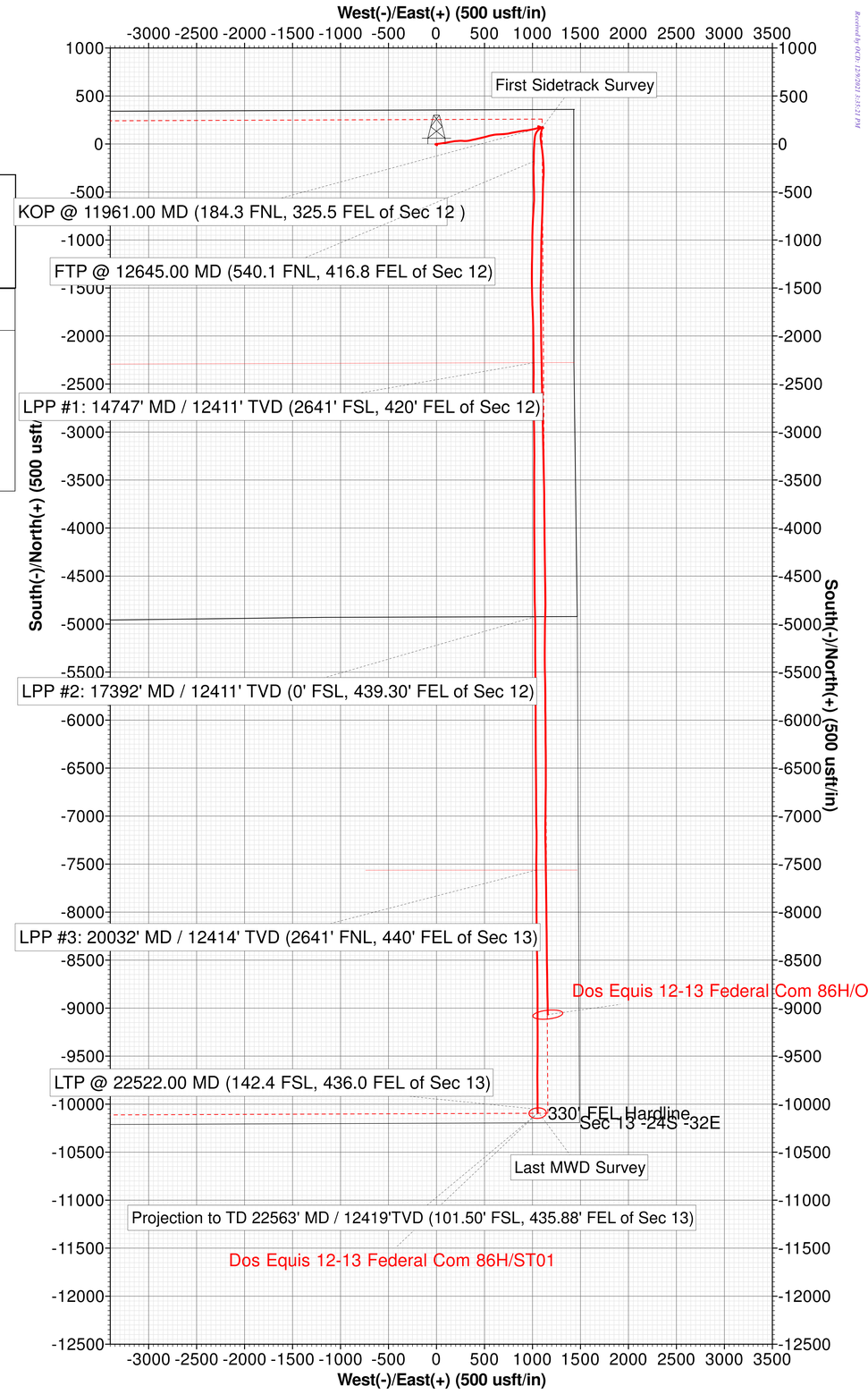

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone




Azimuths to Grid North
True North: -0.38°
Magnetic North: 6.40°

Magnetic Field
Strength: 47713.0nT
Dip Angle: 59.96°
Date: 12/31/2019
Model: BGGM2018

HALLIBURTON | Sperry Drilling



# Cimarex

**Lea County, New Mexico (NAD83)  Dos Equis 13 Federal Pad (Grid)**

**API#**

## Dos Equis 12-13 Federal Com 86H

**360' FNL - 1430' FEL**

**ST01**

**Design: Final Surveys**

## Sperry Drilling Services

# Combo Report

**01 December, 2021**

| | | |
|---|---|---|
| Well Coordinates: | 32° 14' 18.492903 N<br>103° 37' 27.880863 W | North American Datum 1983<br>New Mexico Eastern Zone<br>451,212.41 N<br>760,526.60 E |
| Ground Level: 3,600.40 usft | | |
| Local Coordinate Origin: | | Centered on Well Dos Equis 12-13 Federal Com 86H |
| Viewing Datum: | | RKB (H&P 380) 26' + GL(3600.4) @ 3626.40usft |
| TVDs to System: | | N |
| **North Reference:** | | **Grid** |
| Unit System: | | Midcon (2 decimal) |
| Compass Version: 5000.15 Build: 91E | | |
| Report Version: Midcon Combo v1.15 | | |

HALLIBURTON

## Design Report for Dos Equis 12-13 Federal Com 86H - Final Surveys

| Measured Depth (usft) | Inclination (°) | Grid Azimuth (°) | Vertical Depth (usft) | Local Coordinates Northing (usft) | Local Coordinates Easting (usft) | Map Coordinates Northing (usft) | Map Coordinates Easting (usft) | Dogleg Rate (°/100usft) | Vertical Section (usft) | Toolface Angle (°) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 N | 0.00 E | 451,212.410 | 760,526.600 | 0.00 | 0.00 | 0.00 | |
| 120.00 | 1.11 | 176.29 | 119.99 | 1.16 S | 0.08 E | 451,211.250 | 760,526.675 | 0.92 | 1.16 | 176.29 | |
| 209.00 | 1.51 | 170.79 | 208.97 | 3.18 S | 0.32 E | 451,209.232 | 760,526.919 | 0.47 | 3.18 | -20.21 | |
| 308.00 | 1.47 | 168.10 | 307.94 | 5.71 S | 0.79 E | 451,206.702 | 760,527.389 | 0.08 | 5.71 | -121.10 | |
| 399.00 | 0.89 | 160.95 | 398.92 | 7.52 S | 1.26 E | 451,204.892 | 760,527.861 | 0.66 | 7.53 | -169.31 | |
| 490.00 | 0.93 | 157.14 | 489.90 | 8.87 S | 1.78 E | 451,203.543 | 760,528.378 | 0.08 | 8.88 | -58.45 | |
| 581.00 | 0.91 | 156.59 | 580.89 | 10.21 S | 2.35 E | 451,202.200 | 760,528.952 | 0.02 | 10.22 | -156.45 | |
| 671.00 | 0.96 | 151.06 | 670.88 | 11.53 S | 3.00 E | 451,200.884 | 760,529.601 | 0.11 | 11.54 | -63.79 | |
| 762.00 | 1.01 | 149.72 | 761.87 | 12.89 S | 3.77 E | 451,199.524 | 760,530.374 | 0.06 | 12.91 | -25.41 | |
| 856.00 | 0.41 | 37.21 | 855.86 | 13.33 S | 4.40 E | 451,199.077 | 760,530.995 | 1.31 | 13.36 | -162.02 | |
| 950.00 | 0.39 | 21.77 | 949.86 | 12.77 S | 4.72 E | 451,199.642 | 760,531.317 | 0.12 | 12.80 | -108.17 | |
| 1,044.00 | 0.30 | 26.47 | 1,043.86 | 12.25 S | 4.95 E | 451,200.159 | 760,531.546 | 0.10 | 12.28 | 164.89 | |
| 1,138.00 | 0.33 | 21.50 | 1,137.86 | 11.78 S | 5.15 E | 451,200.631 | 760,531.755 | 0.04 | 11.81 | -44.83 | |
| 1,165.00 | 0.20 | 18.63 | 1,164.86 | 11.66 S | 5.20 E | 451,200.748 | 760,531.798 | 0.48 | 11.69 | -175.60 | |
| 1,205.00 | 0.22 | 3.13 | 1,204.86 | 11.52 S | 5.22 E | 451,200.890 | 760,531.825 | 0.15 | 11.55 | -80.31 | 13 3/8" |
| 1,257.00 | 0.26 | 347.63 | 1,256.86 | 11.31 S | 5.20 E | 451,201.104 | 760,531.805 | 0.15 | 11.34 | -64.81 | |
| 1,320.00 | 0.23 | 341.96 | 1,319.86 | 11.05 S | 5.14 E | 451,201.364 | 760,531.735 | 0.06 | 11.08 | -143.87 | |
| 1,414.00 | 0.37 | 323.56 | 1,413.85 | 10.62 S | 4.90 E | 451,201.788 | 760,531.496 | 0.18 | 10.65 | -43.97 | |
| 1,508.00 | 0.45 | 283.83 | 1,507.85 | 10.29 S | 4.36 E | 451,202.120 | 760,530.958 | 0.31 | 10.32 | -94.75 | |
| 1,603.00 | 0.54 | 274.50 | 1,602.85 | 10.17 S | 3.55 E | 451,202.244 | 760,530.149 | 0.13 | 10.19 | -46.58 | |
| 1,697.00 | 0.70 | 282.94 | 1,696.84 | 10.00 S | 2.55 E | 451,202.408 | 760,529.148 | 0.20 | 10.02 | 33.98 | |
| 1,791.00 | 0.76 | 283.94 | 1,790.84 | 9.72 S | 1.38 E | 451,202.687 | 760,527.983 | 0.07 | 9.73 | 12.49 | |
| 1,885.00 | 0.92 | 285.93 | 1,884.83 | 9.37 S | 0.05 E | 451,203.044 | 760,526.653 | 0.17 | 9.37 | 11.33 | |
| 1,980.00 | 0.92 | 290.78 | 1,979.81 | 8.89 S | 1.39 W | 451,203.524 | 760,525.206 | 0.08 | 8.88 | 92.42 | |
| 2,074.00 | 1.18 | 298.38 | 2,073.80 | 8.16 S | 2.95 W | 451,204.252 | 760,523.649 | 0.31 | 8.14 | 32.01 | |
| 2,168.00 | 1.21 | 296.43 | 2,167.78 | 7.26 S | 4.69 W | 451,205.153 | 760,521.909 | 0.05 | 7.23 | -54.56 | |
| 2,262.00 | 1.41 | 298.51 | 2,261.75 | 6.26 S | 6.60 W | 451,206.147 | 760,520.004 | 0.22 | 6.22 | 14.42 | |
| 2,356.00 | 1.54 | 300.26 | 2,355.72 | 5.07 S | 8.70 W | 451,207.336 | 760,517.896 | 0.15 | 5.02 | 19.99 | |
| 2,451.00 | 0.52 | 296.43 | 2,450.70 | 4.24 S | 10.19 W | 451,208.171 | 760,516.408 | 1.08 | 4.18 | -178.05 | |
| 2,545.00 | 0.23 | 341.47 | 2,544.70 | 3.87 S | 10.63 W | 451,208.540 | 760,515.966 | 0.42 | 3.81 | 155.52 | |
| 2,639.00 | 0.41 | 345.86 | 2,638.70 | 3.37 S | 10.78 W | 451,209.045 | 760,515.824 | 0.19 | 3.30 | 9.96 | |
| 2,734.00 | 0.60 | 338.17 | 2,733.70 | 2.57 S | 11.04 W | 451,209.836 | 760,515.556 | 0.21 | 2.51 | -23.50 | |
| 2,828.00 | 1.07 | 40.11 | 2,827.69 | 1.45 S | 10.66 W | 451,210.964 | 760,515.938 | 1.01 | 1.38 | 95.84 | |
| 2,922.00 | 2.61 | 78.21 | 2,921.64 | 0.34 S | 8.00 W | 451,212.073 | 760,518.599 | 2.01 | 0.29 | 58.57 | |
| 3,017.00 | 4.24 | 85.48 | 3,016.47 | 0.38 N | 2.38 W | 451,212.792 | 760,524.218 | 1.77 | -0.40 | 18.57 | |
| 3,111.00 | 6.19 | 86.48 | 3,110.07 | 0.97 N | 6.14 E | 451,213.377 | 760,532.741 | 2.08 | -0.93 | 3.17 | |

## Design Report for Dos Equis 12-13 Federal Com 86H - Final Surveys

| Measured Depth (usft) | Inclination (°) | Grid Azimuth (°) | Vertical Depth (usft) | Local Coordinates Northing (usft) | Local Coordinates Easting (usft) | Map Coordinates Northing (usft) | Map Coordinates Easting (usft) | Dogleg Rate (°/100usft) | Vertical Section (usft) | Toolface Angle (°) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3,206.00 | 8.35 | 83.95 | 3,204.30 | 2.01 N | 18.11 E | 451,214.418 | 760,544.714 | 2.30 | -1.90 | -9.69 | |
| 3,300.00 | 10.22 | 82.35 | 3,297.07 | 3.84 N | 33.17 E | 451,216.248 | 760,559.767 | 2.01 | -3.64 | -8.65 | |
| 3,395.00 | 11.01 | 82.27 | 3,390.44 | 6.18 N | 50.51 E | 451,218.590 | 760,577.110 | 0.83 | -5.88 | -1.11 | |
| 3,489.00 | 10.61 | 81.72 | 3,482.77 | 8.63 N | 67.97 E | 451,221.044 | 760,594.568 | 0.44 | -8.23 | -165.81 | |
| 3,584.00 | 9.89 | 80.54 | 3,576.26 | 11.23 N | 84.67 E | 451,223.644 | 760,611.270 | 0.79 | -10.73 | -164.32 | |
| 3,678.00 | 10.73 | 80.20 | 3,668.74 | 14.05 N | 101.26 E | 451,226.460 | 760,627.856 | 0.90 | -13.45 | -4.31 | |
| 3,772.00 | 11.01 | 80.36 | 3,761.05 | 17.04 N | 118.73 E | 451,229.453 | 760,645.328 | 0.30 | -16.34 | 6.23 | |
| 3,867.00 | 10.57 | 80.15 | 3,854.37 | 20.05 N | 136.26 E | 451,232.463 | 760,662.857 | 0.47 | -19.24 | -175.00 | |
| 3,961.00 | 9.59 | 80.28 | 3,946.92 | 22.85 N | 152.47 E | 451,235.259 | 760,679.069 | 1.04 | -21.94 | 178.73 | |
| 4,055.00 | 10.07 | 80.55 | 4,039.54 | 25.52 N | 168.29 E | 451,237.931 | 760,694.893 | 0.51 | -24.52 | 5.62 | |
| 4,150.00 | 10.38 | 79.01 | 4,133.03 | 28.52 N | 184.89 E | 451,240.926 | 760,711.488 | 0.44 | -27.42 | -42.17 | |
| 4,244.00 | 10.42 | 84.86 | 4,225.49 | 30.89 N | 201.67 E | 451,243.302 | 760,728.267 | 1.12 | -29.69 | 90.71 | |
| 4,338.00 | 10.65 | 88.02 | 4,317.91 | 31.95 N | 218.81 E | 451,244.364 | 760,745.415 | 0.66 | -30.65 | 69.85 | |
| 4,432.00 | 10.18 | 85.80 | 4,410.36 | 32.86 N | 235.78 E | 451,245.272 | 760,762.380 | 0.66 | -31.46 | -140.59 | |
| 4,526.00 | 10.49 | 89.33 | 4,502.83 | 33.57 N | 252.62 E | 451,245.981 | 760,779.221 | 0.75 | -32.07 | 65.66 | |
| 4,621.00 | 10.72 | 93.50 | 4,596.21 | 33.13 N | 270.09 E | 451,245.542 | 760,796.688 | 0.84 | -31.53 | 75.37 | |
| 4,715.00 | 10.44 | 94.39 | 4,688.61 | 31.95 N | 287.31 E | 451,244.357 | 760,813.906 | 0.34 | -30.24 | 150.17 | |
| 4,810.00 | 8.93 | 89.27 | 4,782.26 | 31.38 N | 303.26 E | 451,243.792 | 760,829.862 | 1.83 | -29.58 | -152.81 | |
| 4,904.00 | 8.67 | 83.95 | 4,875.15 | 32.22 N | 317.60 E | 451,244.631 | 760,844.203 | 0.91 | -30.34 | -110.33 | |
| 4,998.00 | 9.20 | 79.53 | 4,968.01 | 34.33 N | 332.04 E | 451,246.744 | 760,858.638 | 0.92 | -32.36 | -54.53 | |
| 5,093.00 | 10.72 | 78.51 | 5,061.58 | 37.47 N | 348.17 E | 451,249.884 | 760,874.765 | 1.61 | -35.41 | -7.12 | |
| 5,187.00 | 11.10 | 76.36 | 5,153.88 | 41.35 N | 365.53 E | 451,253.759 | 760,892.126 | 0.59 | -39.18 | -48.02 | |
| 5,281.00 | 11.47 | 78.35 | 5,246.06 | 45.37 N | 383.47 E | 451,257.780 | 760,910.073 | 0.57 | -43.09 | 47.44 | |
| 5,375.00 | 11.96 | 78.48 | 5,338.11 | 49.20 N | 402.17 E | 451,261.613 | 760,928.770 | 0.52 | -46.82 | 3.15 | |
| 5,470.00 | 11.32 | 77.43 | 5,431.15 | 53.20 N | 420.92 E | 451,265.608 | 760,947.516 | 0.71 | -50.70 | -162.20 | |
| 5,564.00 | 10.98 | 77.52 | 5,523.38 | 57.14 N | 438.66 E | 451,269.550 | 760,965.261 | 0.36 | -54.54 | 177.11 | |
| 5,658.00 | 11.14 | 77.14 | 5,615.63 | 61.10 N | 456.25 E | 451,273.506 | 760,982.854 | 0.19 | -58.39 | -24.68 | |
| 5,753.00 | 10.98 | 76.82 | 5,708.87 | 65.20 N | 474.01 E | 451,277.611 | 761,000.610 | 0.18 | -62.39 | -159.17 | |
| 5,847.00 | 10.72 | 76.18 | 5,801.19 | 69.33 N | 491.22 E | 451,281.741 | 761,017.815 | 0.30 | -66.41 | -155.45 | |
| 5,941.00 | 10.31 | 74.76 | 5,893.61 | 73.63 N | 507.82 E | 451,286.040 | 761,034.421 | 0.52 | -70.62 | -148.40 | |
| 6,035.00 | 10.14 | 73.05 | 5,986.11 | 78.25 N | 523.85 E | 451,290.664 | 761,050.452 | 0.37 | -75.14 | -120.09 | |
| 6,130.00 | 10.30 | 75.77 | 6,079.61 | 82.78 N | 540.08 E | 451,295.189 | 761,066.684 | 0.54 | -79.57 | 73.00 | |
| 6,224.00 | 10.27 | 78.01 | 6,172.10 | 86.59 N | 556.43 E | 451,298.996 | 761,083.026 | 0.43 | -83.28 | 95.39 | |
| 6,318.00 | 10.24 | 77.72 | 6,264.60 | 90.10 N | 572.79 E | 451,302.514 | 761,099.387 | 0.06 | -86.70 | -120.30 | |
| 6,412.00 | 10.47 | 77.33 | 6,357.07 | 93.75 N | 589.28 E | 451,306.164 | 761,115.884 | 0.26 | -90.26 | -17.14 | |
| 6,506.00 | 10.58 | 82.57 | 6,449.49 | 96.74 N | 606.17 E | 451,309.154 | 761,132.775 | 1.02 | -93.14 | 86.02 | |
| 6,600.00 | 10.41 | 85.52 | 6,541.91 | 98.52 N | 623.20 E | 451,310.933 | 761,149.798 | 0.60 | -94.82 | 109.00 | |

## Design Report for Dos Equis 12-13 Federal Com 86H - Final Surveys

| Measured Depth (usft) | Inclination (°) | Grid Azimuth (°) | Vertical Depth (usft) | Local Coordinates Northing (usft) | Local Coordinates Easting (usft) | Map Coordinates Northing (usft) | Map Coordinates Easting (usft) | Dogleg Rate (°/100usft) | Vertical Section (usft) | Toolface Angle (°) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6,695.00 | 9.83 | 86.28 | 6,635.44 | 99.72 N | 639.85 E | 451,312.129 | 761,166.448 | 0.63 | -95.92 | 167.41 | |
| 6,789.00 | 9.65 | 87.29 | 6,728.08 | 100.61 N | 655.72 E | 451,313.023 | 761,182.325 | 0.26 | -96.72 | 136.99 | |
| 6,883.00 | 9.16 | 88.62 | 6,820.82 | 101.17 N | 671.07 E | 451,313.575 | 761,197.674 | 0.57 | -97.18 | 156.74 | |
| 6,977.00 | 9.02 | 85.63 | 6,913.64 | 101.91 N | 685.90 E | 451,314.317 | 761,212.501 | 0.52 | -97.83 | -107.98 | |
| 7,071.00 | 9.00 | 84.04 | 7,006.48 | 103.23 N | 700.56 E | 451,315.642 | 761,227.161 | 0.27 | -99.07 | -95.38 | |
| 7,165.00 | 9.08 | 85.54 | 7,099.31 | 104.57 N | 715.27 E | 451,316.982 | 761,241.869 | 0.26 | -100.33 | 71.99 | |
| 7,260.00 | 9.18 | 82.18 | 7,193.11 | 106.19 N | 730.25 E | 451,318.596 | 761,256.850 | 0.57 | -101.85 | -81.04 | |
| 7,354.00 | 9.25 | 81.06 | 7,285.89 | 108.38 N | 745.14 E | 451,320.790 | 761,271.741 | 0.20 | -103.96 | -69.23 | |
| 7,448.00 | 8.77 | 77.93 | 7,378.73 | 111.05 N | 759.61 E | 451,323.463 | 761,286.212 | 0.73 | -106.54 | -135.94 | |
| 7,637.00 | 8.33 | 79.37 | 7,565.63 | 116.59 N | 787.16 E | 451,329.001 | 761,313.758 | 0.26 | -111.92 | 154.76 | |
| 7,732.00 | 8.41 | 78.75 | 7,659.62 | 119.22 N | 800.74 E | 451,331.626 | 761,327.335 | 0.13 | -114.46 | -48.75 | |
| 7,826.00 | 8.36 | 80.10 | 7,752.62 | 121.73 N | 814.21 E | 451,334.142 | 761,340.809 | 0.22 | -116.90 | 104.92 | |
| 7,920.00 | 8.86 | 78.60 | 7,845.56 | 124.34 N | 828.04 E | 451,336.748 | 761,354.637 | 0.58 | -119.42 | -24.93 | |
| 8,015.00 | 9.21 | 78.23 | 7,939.38 | 127.33 N | 842.65 E | 451,339.744 | 761,369.251 | 0.37 | -122.33 | -9.61 | |
| 8,109.00 | 9.58 | 79.56 | 8,032.12 | 130.29 N | 857.71 E | 451,342.696 | 761,384.308 | 0.46 | -125.19 | 31.06 | |
| 8,203.00 | 9.37 | 80.42 | 8,124.84 | 132.98 N | 872.95 E | 451,345.387 | 761,399.546 | 0.27 | -127.79 | 146.44 | |
| 8,298.00 | 9.73 | 81.98 | 8,218.52 | 135.38 N | 888.52 E | 451,347.794 | 761,415.121 | 0.47 | -130.11 | 36.48 | |
| 8,392.00 | 9.66 | 82.61 | 8,311.18 | 137.51 N | 904.21 E | 451,349.917 | 761,430.807 | 0.14 | -132.14 | 123.73 | |
| 8,486.00 | 9.08 | 82.75 | 8,403.92 | 139.46 N | 919.39 E | 451,351.867 | 761,445.987 | 0.62 | -134.00 | 177.82 | |
| 8,580.00 | 9.64 | 82.93 | 8,496.67 | 141.36 N | 934.56 E | 451,353.772 | 761,461.155 | 0.60 | -135.81 | 3.08 | |
| 8,674.00 | 9.27 | 81.35 | 8,589.39 | 143.47 N | 949.85 E | 451,355.879 | 761,476.451 | 0.48 | -137.83 | -145.73 | |
| 8,768.00 | 8.30 | 80.56 | 8,682.29 | 145.72 N | 964.03 E | 451,358.131 | 761,490.629 | 1.04 | -140.00 | -173.30 | |
| 8,862.00 | 8.01 | 78.65 | 8,775.34 | 148.12 N | 977.14 E | 451,360.533 | 761,503.743 | 0.42 | -142.32 | -137.89 | |
| 8,957.00 | 9.17 | 78.54 | 8,869.27 | 150.93 N | 991.05 E | 451,363.339 | 761,517.652 | 1.22 | -145.05 | -0.87 | |
| 9,051.00 | 8.63 | 80.52 | 8,962.14 | 153.58 N | 1,005.35 E | 451,365.989 | 761,531.949 | 0.66 | -147.61 | 151.41 | |
| 9,145.00 | 7.65 | 78.93 | 9,055.19 | 155.94 N | 1,018.45 E | 451,368.352 | 761,545.046 | 1.07 | -149.90 | -167.85 | |
| 9,239.00 | 6.78 | 75.42 | 9,148.45 | 158.54 N | 1,029.96 E | 451,370.950 | 761,556.557 | 1.04 | -152.43 | -154.86 | |
| 9,334.00 | 5.27 | 71.28 | 9,242.92 | 161.35 N | 1,039.52 E | 451,373.762 | 761,566.116 | 1.65 | -155.18 | -166.00 | |
| 9,428.00 | 3.99 | 73.09 | 9,336.61 | 163.69 N | 1,046.73 E | 451,376.099 | 761,573.334 | 1.37 | -157.47 | 174.39 | |
| 9,522.00 | 4.33 | 91.40 | 9,430.37 | 164.55 N | 1,053.41 E | 451,376.964 | 761,580.011 | 1.45 | -158.30 | 84.89 | |
| 9,617.00 | 3.56 | 87.79 | 9,525.14 | 164.58 N | 1,059.94 E | 451,376.990 | 761,586.543 | 0.85 | -158.29 | -163.92 | |
| 9,711.00 | 2.54 | 70.35 | 9,619.01 | 165.39 N | 1,064.82 E | 451,377.803 | 761,591.422 | 1.46 | -159.07 | -146.19 | |
| 9,805.00 | 2.11 | 28.85 | 9,712.94 | 167.61 N | 1,067.62 E | 451,380.019 | 761,594.218 | 1.80 | -161.27 | -124.45 | |
| 9,899.00 | 2.99 | 346.22 | 9,806.85 | 171.51 N | 1,067.87 E | 451,383.916 | 761,594.469 | 2.16 | -165.17 | -87.43 | |
| 9,996.00 | 3.55 | 319.28 | 9,903.70 | 176.24 N | 1,065.31 E | 451,388.650 | 761,591.907 | 1.67 | -169.91 | -83.77 | |
| 10,090.00 | 3.39 | 321.23 | 9,997.53 | 180.61 N | 1,061.67 E | 451,393.022 | 761,588.269 | 0.21 | -174.31 | 144.56 | |
| 10,184.00 | 1.65 | 353.38 | 10,091.44 | 184.12 N | 1,059.77 E | 451,396.534 | 761,586.372 | 2.32 | -177.83 | 156.22 | |

## Design Report for Dos Equis 12-13 Federal Com 86H - Final Surveys

| Measured Depth (usft) | Inclination (°) | Grid Azimuth (°) | Vertical Depth (usft) | Local Coordinates Northing (usft) | Local Coordinates Easting (usft) | Map Coordinates Northing (usft) | Map Coordinates Easting (usft) | Dogleg Rate (°/100usft) | Vertical Section (usft) | Toolface Angle (°) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10,279.00 | 2.72 | 104.79 | 10,186.40 | 184.91 N | 1,061.79 E | 451,397.317 | 761,588.394 | 3.85 | -178.60 | 136.20 | |
| 10,374.00 | 4.33 | 107.88 | 10,281.21 | 183.23 N | 1,067.39 E | 451,395.641 | 761,593.987 | 1.71 | -176.89 | 8.27 | |
| 10,469.00 | 3.99 | 110.92 | 10,375.96 | 180.95 N | 1,073.89 E | 451,393.359 | 761,600.488 | 0.43 | -174.57 | 148.54 | |
| 10,564.00 | 3.60 | 117.73 | 10,470.75 | 178.38 N | 1,079.62 E | 451,390.791 | 761,606.215 | 0.63 | -171.97 | 134.23 | |
| 10,658.00 | 2.19 | 124.29 | 10,564.63 | 176.00 N | 1,083.71 E | 451,388.406 | 761,610.311 | 1.54 | -169.56 | 170.04 | |
| 10,752.00 | 1.63 | 120.10 | 10,658.58 | 174.31 N | 1,086.35 E | 451,386.724 | 761,612.952 | 0.61 | -167.86 | -168.09 | |
| 10,847.00 | 2.80 | 110.70 | 10,753.51 | 172.82 N | 1,089.69 E | 451,385.226 | 761,616.292 | 1.29 | -166.35 | -21.98 | |
| 10,941.00 | 4.05 | 113.33 | 10,847.34 | 170.69 N | 1,094.89 E | 451,383.100 | 761,621.488 | 1.34 | -164.19 | 8.48 | |
| 11,035.00 | 4.37 | 108.40 | 10,941.08 | 168.24 N | 1,101.33 E | 451,380.655 | 761,627.934 | 0.51 | -161.71 | -50.99 | |
| 11,130.00 | 2.92 | 107.18 | 11,035.89 | 166.39 N | 1,107.08 E | 451,378.798 | 761,633.680 | 1.53 | -159.82 | -177.55 | |
| 11,224.00 | 1.46 | 109.96 | 11,129.82 | 165.27 N | 1,110.49 E | 451,377.681 | 761,637.093 | 1.56 | -158.68 | 177.23 | |
| 11,318.00 | 0.34 | 54.82 | 11,223.81 | 165.02 N | 1,111.85 E | 451,377.433 | 761,638.447 | 1.38 | -158.42 | -167.57 | |
| 11,413.00 | 0.64 | 21.20 | 11,318.80 | 165.68 N | 1,112.27 E | 451,378.090 | 761,638.869 | 0.42 | -159.08 | -61.43 | |
| 11,507.00 | 1.01 | 341.96 | 11,412.79 | 166.96 N | 1,112.20 E | 451,379.368 | 761,638.803 | 0.70 | -160.35 | -77.45 | |
| 11,601.00 | 1.25 | 332.39 | 11,506.78 | 168.65 N | 1,111.47 E | 451,381.064 | 761,638.071 | 0.32 | -162.06 | -43.03 | |
| 11,696.00 | 1.56 | 319.32 | 11,601.75 | 170.55 N | 1,110.15 E | 451,382.963 | 761,636.748 | 0.47 | -163.96 | -52.61 | |
| 11,790.00 | 1.52 | 315.95 | 11,695.71 | 172.42 N | 1,108.45 E | 451,384.829 | 761,635.047 | 0.11 | -165.84 | -115.51 | |
| 11,900.00 | 1.48 | 303.95 | 11,805.68 | 174.26 N | 1,106.25 E | 451,386.671 | 761,632.854 | 0.29 | -167.69 | -103.23 | |
| 11,929.00 | 1.79 | 299.68 | 11,834.66 | 174.69 N | 1,105.55 E | 451,387.105 | 761,632.150 | 1.15 | -168.13 | -23.60 | |
| 11,961.00 | 1.83 | 274.03 | 11,866.65 | 174.98 N | 1,104.61 E | 451,387.388 | 761,631.206 | 2.51 | -168.42 | -100.04 | |
| 11,992.00 | 4.64 | 218.70 | 11,897.60 | 174.03 N | 1,103.33 E | 451,386.444 | 761,629.928 | 12.58 | -167.48 | -77.98 | First Sidetrack Survey |
| 12,045.00 | 14.13 | 241.54 | 11,949.85 | 169.27 N | 1,096.28 E | 451,381.676 | 761,622.882 | 18.89 | -162.76 | 33.02 | |
| 12,076.00 | 18.53 | 242.00 | 11,979.59 | 165.15 N | 1,088.60 E | 451,377.558 | 761,615.202 | 14.20 | -158.69 | 1.91 | |
| 12,108.00 | 22.73 | 239.11 | 12,009.53 | 159.58 N | 1,078.80 E | 451,371.994 | 761,605.403 | 13.50 | -153.18 | -14.99 | |
| 12,139.00 | 26.52 | 231.29 | 12,037.71 | 152.18 N | 1,068.26 E | 451,364.587 | 761,594.856 | 16.10 | -145.83 | -44.29 | |
| 12,171.00 | 28.99 | 224.11 | 12,066.04 | 142.14 N | 1,057.28 E | 451,354.547 | 761,583.879 | 12.98 | -135.86 | -56.76 | |
| 12,203.00 | 30.21 | 215.43 | 12,093.87 | 130.00 N | 1,047.21 E | 451,342.413 | 761,573.809 | 13.92 | -123.79 | -77.92 | |
| 12,234.00 | 31.44 | 207.41 | 12,120.51 | 116.46 N | 1,038.96 E | 451,328.874 | 761,565.562 | 13.83 | -110.30 | -76.81 | |
| 12,266.00 | 32.17 | 200.50 | 12,147.71 | 101.07 N | 1,032.13 E | 451,313.481 | 761,558.735 | 11.60 | -94.94 | -81.62 | |
| 12,297.00 | 34.19 | 191.56 | 12,173.67 | 84.80 N | 1,027.50 E | 451,297.206 | 761,554.096 | 17.06 | -78.70 | -71.35 | |
| 12,329.00 | 37.49 | 186.50 | 12,199.61 | 66.30 N | 1,024.59 E | 451,278.712 | 761,551.190 | 13.85 | -60.22 | -43.99 | |
| 12,361.00 | 41.15 | 184.91 | 12,224.37 | 46.13 N | 1,022.59 E | 451,258.540 | 761,549.186 | 11.86 | -40.06 | -16.01 | |
| 12,392.00 | 43.29 | 184.77 | 12,247.32 | 25.37 N | 1,020.83 E | 451,237.784 | 761,547.429 | 6.91 | -19.32 | -2.57 | |
| 12,424.00 | 45.43 | 184.14 | 12,270.20 | 3.07 N | 1,019.09 E | 451,215.480 | 761,545.694 | 6.83 | 2.98 | -11.86 | |
| 12,455.00 | 48.86 | 182.36 | 12,291.28 | 19.61 S | 1,017.82 E | 451,192.795 | 761,544.415 | 11.84 | 25.65 | -21.44 | |
| 12,487.00 | 53.46 | 183.00 | 12,311.34 | 44.51 S | 1,016.65 E | 451,167.905 | 761,543.246 | 14.46 | 50.54 | 6.39 | |

## Design Report for Dos Equis 12-13 Federal Com 86H - Final Surveys

| Measured Depth (usft) | Inclination (°) | Grid Azimuth (°) | Vertical Depth (usft) | Local Coordinates Northing (usft) | Local Coordinates Easting (usft) | Map Coordinates Northing (usft) | Map Coordinates Easting (usft) | Dogleg Rate (°/100usft) | Vertical Section (usft) | Toolface Angle (°) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12,519.00 | 55.31 | 181.71 | 12,329.98 | 70.50 S | 1,015.58 E | 451,141.914 | 761,542.180 | 6.65 | 76.52 | -29.93 | |
| 12,550.00 | 58.90 | 181.56 | 12,346.81 | 96.51 S | 1,014.84 E | 451,115.900 | 761,541.438 | 11.59 | 102.53 | -2.05 | |
| 12,582.00 | 62.13 | 180.12 | 12,362.56 | 124.36 S | 1,014.44 E | 451,088.052 | 761,541.036 | 10.83 | 130.38 | -21.57 | |
| 12,613.00 | 64.04 | 180.67 | 12,376.59 | 152.00 S | 1,014.24 E | 451,060.412 | 761,540.844 | 6.36 | 158.01 | 14.53 | |
| 12,645.00 | 67.74 | 181.65 | 12,389.66 | 181.19 S | 1,013.65 E | 451,031.215 | 761,540.249 | 11.90 | 187.21 | 13.79 | FTP @ 12645.00 MD (540.1 FNL, 416.8 FEL of Sec 12) |
| 12,677.00 | 72.72 | 181.96 | 12,400.48 | 211.28 S | 1,012.70 E | 451,001.126 | 761,539.300 | 15.59 | 217.29 | 3.41 | |
| 12,708.00 | 76.99 | 180.93 | 12,408.58 | 241.19 S | 1,011.95 E | 450,971.219 | 761,538.548 | 14.14 | 247.19 | -13.25 | |
| 12,740.00 | 80.92 | 179.22 | 12,414.71 | 272.59 S | 1,011.91 E | 450,939.819 | 761,538.510 | 13.35 | 278.59 | -23.29 | |
| 12,772.00 | 84.68 | 178.77 | 12,418.72 | 304.33 S | 1,012.47 E | 450,908.082 | 761,539.067 | 11.83 | 310.33 | -6.80 | |
| 12,803.00 | 86.86 | 179.56 | 12,421.01 | 335.24 S | 1,012.92 E | 450,877.172 | 761,539.517 | 7.48 | 341.24 | 19.90 | |
| 12,835.00 | 88.55 | 179.98 | 12,422.29 | 367.21 S | 1,013.05 E | 450,845.199 | 761,539.646 | 5.44 | 373.22 | 13.95 | |
| 12,866.00 | 89.51 | 178.93 | 12,422.81 | 398.20 S | 1,013.34 E | 450,814.206 | 761,539.941 | 4.59 | 404.21 | -47.57 | |
| 12,959.00 | 89.02 | 176.72 | 12,424.01 | 491.12 S | 1,016.87 E | 450,721.287 | 761,543.470 | 2.43 | 497.15 | -102.51 | |
| 13,054.00 | 87.80 | 182.94 | 12,426.65 | 586.04 S | 1,017.15 E | 450,626.372 | 761,543.753 | 6.67 | 592.06 | 101.18 | |
| 13,149.00 | 91.15 | 184.15 | 12,427.52 | 680.84 S | 1,011.28 E | 450,531.573 | 761,537.880 | 3.75 | 686.83 | 19.87 | |
| 13,244.00 | 90.92 | 182.57 | 12,425.80 | 775.65 S | 1,005.71 E | 450,436.755 | 761,532.313 | 1.68 | 781.61 | -98.27 | |
| 13,338.00 | 90.91 | 182.61 | 12,424.30 | 869.55 S | 1,001.47 E | 450,342.863 | 761,528.066 | 0.04 | 875.47 | 104.04 | |
| 13,433.00 | 90.17 | 180.62 | 12,423.40 | 964.50 S | 998.79 E | 450,247.910 | 761,525.389 | 2.23 | 970.41 | -110.39 | |
| 13,528.00 | 89.71 | 179.70 | 12,423.50 | 1,059.50 S | 998.52 E | 450,152.912 | 761,525.123 | 1.08 | 1,065.40 | -116.56 | |
| 13,623.00 | 90.71 | 181.86 | 12,423.15 | 1,154.48 S | 997.23 E | 450,057.928 | 761,523.830 | 2.51 | 1,160.38 | 65.16 | |
| 13,718.00 | 89.75 | 180.97 | 12,422.77 | 1,249.45 S | 994.88 E | 449,962.960 | 761,521.484 | 1.38 | 1,255.33 | -137.16 | |
| 13,813.00 | 91.23 | 180.51 | 12,421.96 | 1,344.44 S | 993.66 E | 449,867.975 | 761,520.257 | 1.63 | 1,350.31 | -17.26 | |
| 13,907.00 | 91.25 | 179.40 | 12,419.93 | 1,438.41 S | 993.73 E | 449,773.998 | 761,520.331 | 1.18 | 1,444.28 | -88.96 | |
| 14,002.00 | 91.31 | 178.82 | 12,417.80 | 1,533.38 S | 995.21 E | 449,679.034 | 761,521.806 | 0.61 | 1,539.26 | -84.09 | |
| 14,097.00 | 90.67 | 178.15 | 12,416.16 | 1,628.33 S | 997.72 E | 449,584.082 | 761,524.318 | 0.98 | 1,634.22 | -133.69 | |
| 14,192.00 | 87.81 | 177.11 | 12,417.42 | 1,723.23 S | 1,001.65 E | 449,489.183 | 761,528.245 | 3.20 | 1,729.14 | -160.02 | |
| 14,287.00 | 90.90 | 178.33 | 12,418.49 | 1,818.13 S | 1,005.42 E | 449,394.277 | 761,532.023 | 3.50 | 1,824.07 | 21.55 | |
| 14,382.00 | 91.59 | 179.08 | 12,416.43 | 1,913.08 S | 1,007.57 E | 449,299.325 | 761,534.170 | 1.07 | 1,919.03 | 47.37 | |
| 14,477.00 | 90.53 | 179.13 | 12,414.67 | 2,008.06 S | 1,009.05 E | 449,204.354 | 761,535.654 | 1.12 | 2,014.01 | 177.30 | |
| 14,572.00 | 91.29 | 179.67 | 12,413.16 | 2,103.04 S | 1,010.05 E | 449,109.373 | 761,536.648 | 0.98 | 2,108.99 | 35.39 | |
| 14,667.00 | 90.93 | 179.33 | 12,411.32 | 2,198.02 S | 1,010.88 E | 449,014.394 | 761,537.477 | 0.52 | 2,203.98 | -136.64 | |
| 14,747.00 | 90.16 | 179.21 | 12,410.56 | 2,278.00 S | 1,011.90 E | 448,934.405 | 761,538.495 | 0.97 | 2,283.97 | -171.25 | LPP #1: 14747' MD / 12411' TVD (2641' FSL, 420' FEL of Sec 12) |
| 14,762.00 | 90.02 | 179.19 | 12,410.53 | 2,293.00 S | 1,012.10 E | 448,919.407 | 761,538.704 | 0.97 | 2,298.97 | -171.25 | |
| 14,857.00 | 90.22 | 180.12 | 12,410.33 | 2,388.00 S | 1,012.68 E | 448,824.410 | 761,539.276 | 1.00 | 2,393.97 | 77.86 | |
| 14,952.00 | 90.61 | 180.88 | 12,409.65 | 2,482.99 S | 1,011.85 E | 448,729.417 | 761,538.447 | 0.90 | 2,488.95 | 62.83 | |
| 15,047.00 | 90.18 | 179.43 | 12,408.99 | 2,577.99 S | 1,011.59 E | 448,634.422 | 761,538.190 | 1.59 | 2,583.95 | -106.51 | |

## Design Report for Dos Equis 12-13 Federal Com 86H - Final Surveys

| Measured Depth (usft) | Inclination (°) | Grid Azimuth (°) | Vertical Depth (usft) | Local Coordinates Northing (usft) | Local Coordinates Easting (usft) | Map Coordinates Northing (usft) | Map Coordinates Easting (usft) | Dogleg Rate (°/100usft) | Vertical Section (usft) | Toolface Angle (°) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15,142.00 | 89.83 | 179.31 | 12,408.98 | 2,672.98 S | 1,012.63 E | 448,539.428 | 761,539.235 | 0.39 | 2,678.94 | -161.08 | |
| 15,237.00 | 89.66 | 179.26 | 12,409.41 | 2,767.97 S | 1,013.82 E | 448,444.436 | 761,540.420 | 0.19 | 2,773.94 | -163.61 | |
| 15,332.00 | 89.96 | 178.80 | 12,409.72 | 2,862.96 S | 1,015.43 E | 448,349.451 | 761,542.029 | 0.58 | 2,868.93 | -56.89 | |
| 15,427.00 | 90.47 | 179.21 | 12,409.36 | 2,957.94 S | 1,017.08 E | 448,254.466 | 761,543.678 | 0.69 | 2,963.93 | 38.80 | |
| 15,522.00 | 90.53 | 179.34 | 12,408.54 | 3,052.93 S | 1,018.28 E | 448,159.478 | 761,544.880 | 0.15 | 3,058.92 | 65.22 | |
| 15,617.00 | 89.65 | 179.26 | 12,408.39 | 3,147.92 S | 1,019.44 E | 448,064.486 | 761,546.041 | 0.93 | 3,153.92 | -174.81 | |
| 15,712.00 | 89.22 | 180.13 | 12,409.32 | 3,242.92 S | 1,019.95 E | 447,969.493 | 761,546.547 | 1.02 | 3,248.91 | 116.31 | |
| 15,807.00 | 89.60 | 180.48 | 12,410.30 | 3,337.91 S | 1,019.44 E | 447,874.499 | 761,546.041 | 0.54 | 3,343.90 | 42.65 | |
| 15,902.00 | 90.46 | 180.86 | 12,410.25 | 3,432.90 S | 1,018.33 E | 447,779.507 | 761,544.930 | 0.99 | 3,438.89 | 23.84 | |
| 15,997.00 | 89.97 | 179.91 | 12,409.90 | 3,527.90 S | 1,017.69 E | 447,684.511 | 761,544.292 | 1.13 | 3,533.88 | -117.28 | |
| 16,091.00 | 90.99 | 179.69 | 12,409.11 | 3,621.89 S | 1,018.02 E | 447,590.516 | 761,544.620 | 1.11 | 3,627.87 | -12.17 | |
| 16,186.00 | 90.84 | 179.68 | 12,407.59 | 3,716.88 S | 1,018.54 E | 447,495.530 | 761,545.142 | 0.16 | 3,722.86 | -176.19 | |
| 16,281.00 | 89.99 | 180.10 | 12,406.90 | 3,811.88 S | 1,018.72 E | 447,400.534 | 761,545.324 | 1.00 | 3,817.85 | 153.70 | |
| 16,375.00 | 89.95 | 179.69 | 12,406.95 | 3,905.88 S | 1,018.90 E | 447,306.534 | 761,545.497 | 0.44 | 3,911.85 | -95.57 | |
| 16,470.00 | 89.60 | 179.62 | 12,407.32 | 4,000.87 S | 1,019.47 E | 447,211.537 | 761,546.069 | 0.38 | 4,006.85 | -168.69 | |
| 16,565.00 | 89.71 | 179.83 | 12,407.90 | 4,095.87 S | 1,019.92 E | 447,116.540 | 761,546.525 | 0.25 | 4,101.85 | 62.35 | |
| 16,660.00 | 90.32 | 179.82 | 12,407.87 | 4,190.87 S | 1,020.21 E | 447,021.541 | 761,546.815 | 0.64 | 4,196.85 | -0.94 | |
| 16,755.00 | 88.60 | 179.21 | 12,408.77 | 4,285.86 S | 1,021.02 E | 446,926.552 | 761,547.619 | 1.92 | 4,291.84 | -160.48 | |
| 16,850.00 | 90.69 | 179.67 | 12,409.36 | 4,380.85 S | 1,021.95 E | 446,831.564 | 761,548.547 | 2.25 | 4,386.83 | 12.41 | |
| 16,944.00 | 90.65 | 180.07 | 12,408.26 | 4,474.84 S | 1,022.16 E | 446,737.571 | 761,548.760 | 0.43 | 4,480.83 | 95.71 | |
| 17,039.00 | 90.13 | 179.80 | 12,407.61 | 4,569.84 S | 1,022.27 E | 446,642.574 | 761,548.868 | 0.62 | 4,575.82 | -152.56 | |
| 17,134.00 | 89.60 | 179.50 | 12,407.83 | 4,664.83 S | 1,022.85 E | 446,547.576 | 761,549.448 | 0.64 | 4,670.82 | -150.49 | |
| 17,229.00 | 89.02 | 179.00 | 12,408.98 | 4,759.82 S | 1,024.09 E | 446,452.592 | 761,550.692 | 0.81 | 4,765.81 | -139.24 | |
| 17,324.00 | 89.42 | 178.62 | 12,410.27 | 4,854.79 S | 1,026.06 E | 446,357.621 | 761,552.665 | 0.58 | 4,860.79 | -43.53 | |
| 17,392.00 | 89.36 | 178.81 | 12,411.00 | 4,922.77 S | 1,027.59 E | 446,289.642 | 761,554.188 | 0.30 | 4,928.78 | 108.44 | LPP #2: 17392' MD / 12411' TVD (0' FSL, 439.30' FEL of Sec 12) |
| 17,419.00 | 89.33 | 178.89 | 12,411.31 | 4,949.76 S | 1,028.13 E | 446,262.650 | 761,554.729 | 0.30 | 4,955.77 | 108.44 | |
| 17,513.00 | 89.48 | 180.28 | 12,412.28 | 5,043.75 S | 1,028.81 E | 446,168.659 | 761,555.409 | 1.49 | 5,049.77 | 83.85 | |
| 17,608.00 | 89.20 | 180.02 | 12,413.38 | 5,138.74 S | 1,028.56 E | 446,073.666 | 761,555.161 | 0.40 | 5,144.76 | -137.12 | |
| 17,703.00 | 90.07 | 180.04 | 12,413.98 | 5,233.74 S | 1,028.51 E | 445,978.669 | 761,555.111 | 0.92 | 5,239.75 | 1.32 | |
| 17,798.00 | 90.94 | 179.36 | 12,413.15 | 5,328.73 S | 1,029.01 E | 445,883.676 | 761,555.608 | 1.16 | 5,334.75 | -38.01 | |
| 17,893.00 | 90.50 | 179.85 | 12,411.95 | 5,423.72 S | 1,029.66 E | 445,788.686 | 761,556.263 | 0.69 | 5,429.74 | 131.92 | |
| 17,987.00 | 90.94 | 179.51 | 12,410.77 | 5,517.71 S | 1,030.19 E | 445,694.695 | 761,556.788 | 0.59 | 5,523.73 | -37.69 | |
| 18,082.00 | 90.29 | 179.55 | 12,409.75 | 5,612.71 S | 1,030.97 E | 445,599.704 | 761,557.567 | 0.69 | 5,618.72 | 176.48 | |
| 18,177.00 | 90.04 | 179.79 | 12,409.48 | 5,707.70 S | 1,031.51 E | 445,504.706 | 761,558.114 | 0.36 | 5,713.72 | 136.17 | |
| 18,272.00 | 90.09 | 179.49 | 12,409.37 | 5,802.70 S | 1,032.11 E | 445,409.708 | 761,558.711 | 0.32 | 5,808.72 | -80.54 | |
| 18,367.00 | 90.31 | 179.98 | 12,409.04 | 5,897.70 S | 1,032.55 E | 445,314.710 | 761,559.151 | 0.57 | 5,903.72 | 65.82 | |

## Design Report for Dos Equis 12-13 Federal Com 86H - Final Surveys

| Measured Depth (usft) | Inclination (°) | Grid Azimuth (°) | Vertical Depth (usft) | Local Coordinates Northing (usft) | Local Coordinates Easting (usft) | Map Coordinates Northing (usft) | Map Coordinates Easting (usft) | Dogleg Rate (°/100usft) | Vertical Section (usft) | Toolface Angle (°) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18,462.00 | 89.49 | 179.89 | 12,409.20 | 5,992.70 S | 1,032.66 E | 445,219.711 | 761,559.259 | 0.87 | 5,998.72 | -173.74 | |
| 18,556.00 | 89.33 | 179.69 | 12,410.17 | 6,086.69 S | 1,033.00 E | 445,125.717 | 761,559.603 | 0.27 | 6,092.72 | -128.66 | |
| 18,651.00 | 90.11 | 179.55 | 12,410.64 | 6,181.69 S | 1,033.63 E | 445,030.721 | 761,560.233 | 0.83 | 6,187.71 | -10.18 | |
| 18,746.00 | 89.71 | 179.73 | 12,410.79 | 6,276.69 S | 1,034.23 E | 444,935.723 | 761,560.830 | 0.46 | 6,282.71 | 155.77 | |
| 18,841.00 | 90.27 | 179.61 | 12,410.80 | 6,371.68 S | 1,034.78 E | 444,840.725 | 761,561.377 | 0.60 | 6,377.71 | -12.09 | |
| 18,936.00 | 89.97 | 179.12 | 12,410.60 | 6,466.68 S | 1,035.83 E | 444,745.732 | 761,562.430 | 0.60 | 6,472.71 | -121.48 | |
| 19,030.00 | 90.21 | 179.69 | 12,410.46 | 6,560.67 S | 1,036.81 E | 444,651.737 | 761,563.406 | 0.66 | 6,566.71 | 67.17 | |
| 19,125.00 | 90.34 | 179.58 | 12,410.00 | 6,655.67 S | 1,037.41 E | 444,556.740 | 761,564.011 | 0.18 | 6,661.71 | -40.24 | |
| 19,220.00 | 90.72 | 179.81 | 12,409.12 | 6,750.66 S | 1,037.92 E | 444,461.746 | 761,564.517 | 0.47 | 6,756.70 | 31.18 | |
| 19,315.00 | 88.74 | 179.72 | 12,409.57 | 6,845.66 S | 1,038.31 E | 444,366.753 | 761,564.907 | 2.09 | 6,851.70 | -177.40 | |
| 19,410.00 | 88.20 | 179.34 | 12,412.10 | 6,940.62 S | 1,039.09 E | 444,271.790 | 761,565.686 | 0.69 | 6,946.66 | -144.88 | |
| 19,503.00 | 88.59 | 179.96 | 12,414.71 | 7,033.58 S | 1,039.65 E | 444,178.829 | 761,566.253 | 0.79 | 7,039.63 | 57.83 | |
| 19,598.00 | 89.39 | 177.68 | 12,416.38 | 7,128.54 S | 1,041.61 E | 444,083.871 | 761,568.210 | 2.54 | 7,134.59 | -70.69 | |
| 19,709.00 | 90.50 | 180.49 | 12,416.49 | 7,239.51 S | 1,043.38 E | 443,972.898 | 761,569.982 | 2.72 | 7,245.58 | 68.45 | |
| 19,803.00 | 90.58 | 180.85 | 12,415.61 | 7,333.50 S | 1,042.28 E | 443,878.909 | 761,568.883 | 0.39 | 7,339.56 | 77.47 | |
| 19,898.00 | 90.33 | 181.11 | 12,414.85 | 7,428.48 S | 1,040.66 E | 443,783.926 | 761,567.258 | 0.38 | 7,434.53 | 133.88 | |
| 19,993.00 | 90.11 | 180.02 | 12,414.49 | 7,523.48 S | 1,039.72 E | 443,688.933 | 761,566.321 | 1.17 | 7,529.51 | -101.41 | |
| 20,032.00 | 90.09 | 179.69 | 12,414.42 | 7,562.48 S | 1,039.82 E | 443,649.933 | 761,566.419 | 0.84 | 7,568.51 | -93.58 | LPP #3: 20032' MD / 12414' TVD (2641' FNL, 440' FEL of Sec 13) |
| 20,088.00 | 90.06 | 179.22 | 12,414.34 | 7,618.47 S | 1,040.35 E | 443,593.936 | 761,566.951 | 0.84 | 7,624.51 | -93.58 | |
| 20,183.00 | 89.69 | 179.22 | 12,414.55 | 7,713.47 S | 1,041.64 E | 443,498.945 | 761,568.245 | 0.39 | 7,719.51 | 180.00 | |
| 20,278.00 | 90.31 | 179.68 | 12,414.55 | 7,808.46 S | 1,042.56 E | 443,403.950 | 761,569.156 | 0.81 | 7,814.51 | 36.57 | |
| 20,373.00 | 90.56 | 180.54 | 12,413.83 | 7,903.46 S | 1,042.37 E | 443,308.954 | 761,568.974 | 0.94 | 7,909.50 | 73.79 | |
| 20,468.00 | 90.18 | 179.89 | 12,413.22 | 7,998.45 S | 1,042.02 E | 443,213.957 | 761,568.618 | 0.79 | 8,004.50 | -120.31 | |
| 20,562.00 | 90.60 | 179.40 | 12,412.58 | 8,092.45 S | 1,042.60 E | 443,119.962 | 761,569.200 | 0.69 | 8,098.49 | -49.40 | |
| 20,657.00 | 90.90 | 179.43 | 12,411.33 | 8,187.44 S | 1,043.57 E | 443,024.975 | 761,570.170 | 0.32 | 8,193.48 | 5.71 | |
| 20,752.00 | 89.89 | 179.19 | 12,410.68 | 8,282.42 S | 1,044.71 E | 442,929.985 | 761,571.314 | 1.09 | 8,288.48 | -166.63 | |
| 20,847.00 | 90.42 | 178.37 | 12,410.42 | 8,377.40 S | 1,046.74 E | 442,835.008 | 761,573.337 | 1.03 | 8,383.47 | -57.12 | |
| 20,942.00 | 90.00 | 179.08 | 12,410.07 | 8,472.38 S | 1,048.85 E | 442,740.033 | 761,575.450 | 0.87 | 8,478.45 | 120.60 | |
| 21,037.00 | 89.95 | 179.30 | 12,410.12 | 8,567.37 S | 1,050.19 E | 442,645.043 | 761,576.793 | 0.24 | 8,573.45 | 102.80 | |
| 21,132.00 | 89.52 | 179.55 | 12,410.55 | 8,662.36 S | 1,051.15 E | 442,550.049 | 761,577.747 | 0.52 | 8,668.45 | 149.83 | |
| 21,226.00 | 89.50 | 179.02 | 12,411.36 | 8,756.35 S | 1,052.32 E | 442,456.060 | 761,578.920 | 0.56 | 8,762.44 | -92.16 | |
| 21,321.00 | 89.85 | 179.69 | 12,411.90 | 8,851.34 S | 1,053.39 E | 442,361.068 | 761,579.989 | 0.80 | 8,857.44 | 62.42 | |
| 21,416.00 | 89.80 | 180.23 | 12,412.19 | 8,946.34 S | 1,053.46 E | 442,266.069 | 761,580.055 | 0.57 | 8,952.43 | 95.29 | |
| 21,511.00 | 90.05 | 179.84 | 12,412.31 | 9,041.34 S | 1,053.40 E | 442,171.070 | 761,579.997 | 0.49 | 9,047.43 | -57.34 | |
| 21,606.00 | 90.95 | 180.15 | 12,411.48 | 9,136.34 S | 1,053.41 E | 442,076.074 | 761,580.006 | 1.00 | 9,142.43 | 19.00 | |
| 21,700.00 | 90.11 | 179.36 | 12,410.61 | 9,230.33 S | 1,053.81 E | 441,982.081 | 761,580.408 | 1.23 | 9,236.42 | -136.75 | |

## Design Report for Dos Equis 12-13 Federal Com 86H - Final Surveys

| Measured Depth (usft) | Inclination (°) | Grid Azimuth (°) | Vertical Depth (usft) | Local Coordinates Northing (usft) | Local Coordinates Easting (usft) | Map Coordinates Northing (usft) | Map Coordinates Easting (usft) | Dogleg Rate (°/100usft) | Vertical Section (usft) | Toolface Angle (°) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 21,795.00 | 90.02 | 180.03 | 12,410.51 | 9,325.33 S | 1,054.31 E | 441,887.083 | 761,580.913 | 0.71 | 9,331.42 | 97.65 | |
| 21,890.00 | 90.60 | 180.53 | 12,409.99 | 9,420.32 S | 1,053.85 E | 441,792.086 | 761,580.449 | 0.81 | 9,426.41 | 40.76 | |
| 21,985.00 | 89.98 | 180.30 | 12,409.51 | 9,515.32 S | 1,053.16 E | 441,697.090 | 761,579.761 | 0.70 | 9,521.40 | -159.65 | |
| 22,080.00 | 90.42 | 180.76 | 12,409.18 | 9,610.31 S | 1,052.28 E | 441,602.095 | 761,578.882 | 0.67 | 9,616.39 | 46.27 | |
| 22,175.00 | 88.69 | 179.87 | 12,409.92 | 9,705.31 S | 1,051.76 E | 441,507.104 | 761,578.360 | 2.05 | 9,711.38 | -152.78 | |
| 22,270.00 | 89.40 | 179.81 | 12,411.50 | 9,800.29 S | 1,052.03 E | 441,412.118 | 761,578.625 | 0.75 | 9,806.36 | -4.83 | |
| 22,365.00 | 89.51 | 179.52 | 12,412.40 | 9,895.29 S | 1,052.58 E | 441,317.124 | 761,579.181 | 0.33 | 9,901.36 | -69.23 | |
| 22,460.00 | 87.92 | 179.57 | 12,414.53 | 9,990.26 S | 1,053.33 E | 441,222.154 | 761,579.935 | 1.67 | 9,996.33 | 178.20 | |
| 22,522.00 | 87.35 | 179.55 | 12,417.09 | 10,052.20 S | 1,053.81 E | 441,160.209 | 761,580.412 | 0.92 | 10,058.28 | -177.77 | LTP @ 22522.00 MD (142.4 FSL, 436.0 FEL of Sec 13) |
| 22,544.00 | 87.15 | 179.54 | 12,418.15 | 10,074.17 S | 1,053.99 E | 441,138.235 | 761,580.587 | 0.92 | 10,080.25 | -177.77 | Last MWD Survey |
| 22,563.00 | 87.15 | 179.54 | 12,419.09 | 10,093.15 S | 1,054.14 E | 441,119.259 | 761,580.739 | 0.00 | 10,099.23 | 0.00 | Projection to TD 22563' MD / 12419'TVD (101.50' FSL, 435.88' FEL of Sec 13) |

### Design Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates +N/-S (usft) | Local Coordinates +E/-W (usft) | Comment |
|---|---|---|---|---|
| 11,992.00 | 11,897.60 | 174.03 | 1,103.33 | First Sidetrack Survey |
| 12,645.00 | 12,389.66 | -181.19 | 1,013.65 | FTP @ 12645.00 MD (540.1 FNL, 416.8 FEL of Sec 12) |
| 14,747.00 | 12,410.56 | -2,278.00 | 1,011.90 | LPP #1: 14747' MD / 12411' TVD (2641' FSL, 420' FEL of Sec 12) |
| 17,392.00 | 12,411.00 | -4,922.77 | 1,027.59 | LPP #2: 17392' MD / 12411' TVD (0' FSL, 439.30' FEL of Sec 12) |
| 20,032.00 | 12,414.42 | -7,562.48 | 1,039.82 | LPP #3: 20032' MD / 12414' TVD (2641' FNL, 440' FEL of Sec 13) |
| 22,522.00 | 12,417.09 | -10,052.20 | 1,053.81 | LTP @ 22522.00 MD (142.4 FSL, 436.0 FEL of Sec 13) |
| 22,544.00 | 12,418.15 | -10,074.17 | 1,053.99 | Last MWD Survey |
| 22,563.00 | 12,419.09 | -10,093.15 | 1,054.14 | Projection to TD 22563' MD / 12419'TVD (101.50' FSL, 435.88' FEL of Sec 13) |

### Vertical Section Information

| Angle Type | Target | Azimuth (°) | Origin Type | Origin +N/_S (usft) | Origin +E/-W (usft) | Start TVD (usft) |
|---|---|---|---|---|---|---|
| User | No Target (Freehand) | 179.66 | Slot | 0.00 | 0.00 | 0.00 |

# Design Report for Dos Equis 12-13 Federal Com 86H - Final Surveys

## Survey tool program

| From (usft) | To (usft) | Survey/Plan | Survey Tool |
|---|---|---|---|
| 120.00 | 11,961.00 | MWD (IFR Corrected) | 3_MWD+IFR1+MS |
| 11,992.00 | 22,544.00 | Actual Drilled | 3_MWD+IFR1+MS |
| 22,563.00 | 22,563.00 | Projection to TD | 3_Blind |

## Casing Details

| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") |
|---|---|---|---|---|
| 1,205.00 | 13 3/8" | | 13-3/8 | 14-3/4 |

## Design Targets

| Target Name - hit/miss target - Shape | Dip Angle () | Dip Dir. () | TVD () | +N/-S () | +E/-W () | Northing () | Easting () | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| () | | | | | | | | | |

## Directional Difficulty Index

| | | | |
|---|---|---|---|
| Average Dogleg over Survey: | 1.30 °/100usft | Maximum Dogleg over Survey: | 18.89 °/100usft at 12,045.00 usft |
| Net Tortousity applicable to Plans: | 0.50 °/100usft | Directional Difficulty Index: | 6.788 |

## Audit Info

Cimarex

HALLIBURTON

Lea County, New Mexico (NAD83)

# North Reference Sheet for Dos Equis 13 Federal Pad (Grid) - Dos Equis 12-13 Federal Com 86H - ST01

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to RKB (H&P 380) 26' + GL(3600.4) @ 3626.40usft. Northing and Easting are relative to Dos Equis 12-13 Federal Com 86H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is 104° 19' 60.000000 W°, Longitude Origin:0° 0' 0.000000 E°, Latitude Origin:0° 0' 0.000000 N°

False Easting: 541,337.500usft, False Northing: 0.000usft, Scale Reduction: 0.99996412

Grid Coordinates of Well: 451,212.410 usft N, 760,526.600 usft E

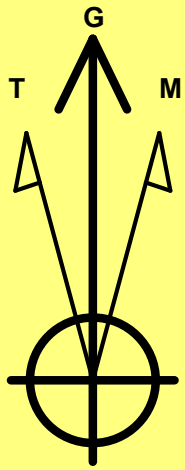
Geographical Coordinates of Well: 32° 14' 18.492903 N, 103° 37' 27.880863 W

Grid Convergence at Surface is: 0.38°

Based upon Minimum Curvature type calculations, at a Measured Depth of 22,563.00usft

the Bottom Hole Displacement is 10,148.05usft in the Direction of 174.04° (Grid).

Magnetic Convergence at surface is: -6.40° (31 December 2019, , BGGM2018)




Magnetic Model: BGGM2018
Date: 31-Dec-19
Declination: 6.78°
Inclination/Dip: 59.96°
Field Strength: 47712.98614151nT

Grid North is 0.38° East of True North (Grid Convergence)
Magnetic North is 6.78° East of True North (Magnetic Declination)
Magnetic North is 6.40° East of Grid North (Magnetic Convergence)

To convert a True Direction to a Grid Direction, Subtract 0.38°
To convert a Magnetic Direction to a True Direction, Add 6.78° East
To convert a Magnetic Direction to a Grid Direction, Add 6.40°

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

**Well Name:** DOS EQUIS 12-13 FEDERAL COM

**Well Location:** T24S / R32E / SEC 12 / NWNE / 32.23847 / -103.62441

**County or Parish/State:** LEA / NM

**Well Number:** 86H

**Type of Well:** OIL WELL

**Allottee or Tribe Name:**

**Lease Number:** NMNM0002889, NMNM02889

**Unit or CA Name:**

**Unit or CA Number:**

**US Well Number:** 3002546324

**Well Status:** Drilling Well

**Operator:** CIMAREX ENERGY COMPANY

## Subsequent Report

**Sundry ID:** 2643364

**Type of Submission:** Subsequent Report

**Type of Action:** Hydraulic Fracturing

**Date Sundry Submitted:** 11/08/2021

**Time Sundry Submitted:** 09:30

**Date Operation Actually Began:** 04/01/2021

**Actual Procedure:** 4/1/2021 Test prod csg to 12,800# for 30mins, good test. 4/22/2021 - 5/5/2021 Perf and Frac 47 stages 12,645 - 22,522 w/ 17,187,067 gals slick wtr, 23,737,000# 100 mesh sand, 1316 holes.5/20/21 Drill out plugs, PBTD @ 22,547. Well is flowing. 5/22/2021 Turn well to production and 1st production.

## Operator Certification

*I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.*

**Operator Electronic Signature:** KANICIA SCHLICHTING

**Signed on:** NOV 08, 2021 09:29 AM

**Name:** CIMAREX ENERGY COMPANY

**Title:** Regulatory Analyst

**Street Address:** 600 N MARIENFELD ST SUITE 600

**City:** MIDLAND **State:** TX

**Phone:** (432) 571-7894

**Email address:** KSCHLICHTING@CIMAREX.COM

## Field Representative

**Representative Name:**

**Street Address:**

**City:** **State:** **Zip:**

**Phone:**

**Email address:**

**Well Name:** DOS EQUIS 12-13 FEDERAL COM

**Well Location:** T24S / R32E / SEC 12 / NWNE / 32.23847 / -103.62441

**County or Parish/State:** LEA / NM

**Well Number:** 86H

**Type of Well:** OIL WELL

**Allottee or Tribe Name:**

**Lease Number:** NMNM0002889, NMNM02889

**Unit or CA Name:**

**Unit or CA Number:**

**US Well Number:** 3002546324

**Well Status:** Drilling Well

**Operator:** CIMAREX ENERGY COMPANY

Submit To Appropriate District Office
Two Copies
District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-105
Revised April 3, 2017

1. WELL API NO. 30-025-46324
2. Type of Lease ☐ STATE ☐ FEE ☒ FED/INDIAN
3. State Oil & Gas Lease No.

# WELL COMPLETION OR RECOMPLETION REPORT AND LOG

4. Reason for filing:

☒ **COMPLETION REPORT** (Fill in boxes #1 through #31 for State and Fee wells only)

☐ **C-144 CLOSURE ATTACHMENT** (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)

5. Lease Name or Unit Agreement Name: Dos Equis 12-13 Federal Com
6. Well Number: 86H

7. Type of Completion:
☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER _____

8. Name of Operator: Cimarex Energy Company
9. OGRID: 215099
10. Address of Operator: 600 N. Marienfeld St., Suite 600, Midland, TX 79701
11. Pool name or Wildcat: WC-025 G-08 S243213C; Wolfcamp 98309

| 12. Location | Unit Ltr | Section | Township | Range | Lot | Feet from the | N/S Line | Feet from the | E/W Line | County |
|---|---|---|---|---|---|---|---|---|---|---|
| **Surface:** | B | 12 | 24S | 32E | | 360 | North | 1430 | East | Lea |
| **BH:** | P | 13 | 24S | 32E | | 102 | South | 436 | East | Lea |

| 13. Date Spudded | 14. Date T.D. Reached | 15. Date Rig Released | 16. Date Completed (Ready to Produce) | 17. Elevations (DF and RKB, RT, GR, etc.) |
|---|---|---|---|---|
| 12/30/19 | 3/23/20 | 3/27/20 | 5/22/21 | 3600 |

| 18. Total Measured Depth of Well | 19. Plug Back Measured Depth | 20. Was Directional Survey Made? | 21. Type Electric and Other Logs Run |
|---|---|---|---|
| 22,563 | 22547 | Yes | Gamma Ray |

22. Producing Interval(s), of this completion - Top, Bottom, Name: 12,645 - 22,522

23. **CASING RECORD** (Report all strings set in well)

| CASING SIZE | WEIGHT LB./FT. | DEPTH SET | HOLE SIZE | CEMENTING RECORD | AMOUNT PULLED |
|---|---|---|---|---|---|
| 10-3/4 | 40.5# | 1232 | 14-3/4 | 920 | |
| 7-5/8 | 29.7# | 12,713 | 9-7/8, 8-3/4 | 5020 | |
| 5 | 18# | 22563 | 6-3/4 | 1420 | |
| | | | | | |
| | | | | | |

24. LINER RECORD

| SIZE | TOP | BOTTOM | SACKS CEMENT | SCREEN |
|---|---|---|---|---|
| | | | | |
| | | | | |

25. TUBING RECORD

| SIZE | DEPTH SET | PACKER SET |
|---|---|---|
| | | |
| | | |

26. Perforation record (interval, size, and number)
12,645 - 22,522 1316 holes

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.

| DEPTH INTERVAL | AMOUNT AND KIND MATERIAL USED |
|---|---|
| 12,645 - 22,522 | 17,187,067 gals Slick water |
| | 27,737,000# 100 Mesh sand |
| | |

28. **PRODUCTION**

| Date First Production | Production Method *(Flowing, gas lift, pumping - Size and type pump)* | Well Status *(Prod. or Shut-in)* |
|---|---|---|
| 5/22/21 | Flowing | Producing |

| Date of Test | Hours Tested | Choke Size | Prod'n For Test Period | Oil - Bbl | Gas - MCF | Water - Bbl. | Gas - Oil Ratio |
|---|---|---|---|---|---|---|---|
| 6/9/2021 | 24hrs | | | 1982 | 4388 | 2134 | 2213 |

| Flow Tubing Press. | Casing Pressure | Calculated 24-Hour Rate | Oil - Bbl. | Gas - MCF | Water - Bbl. | Oil Gravity - API - *(Corr.)* |
|---|---|---|---|---|---|---|
| | 3223 | | 1982 | 4388 | 2134 | 45 |

29. Disposition of Gas *(Sold, used for fuel, vented, etc.)*: Sold
30. Test Witnessed By: Josh Jones
31. List Attachments: C-105, C-102, Additional points required, Survey
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.
33. Rig Release Date: 1/25/21
34. If an on-site burial was used at the well, report the exact location of the on-site burial:
Latitude _____ Longitude _____ NAD83

*I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief*

Signature  Printed Name Kanicia Schlichting Title Regulatory Analyst Date 12/09/21

E-mail Address kschlichting@cimarex.com

# INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well and not later than 60 days after completion of closure. When submitted as a completion report, this shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 11, 12 and 26-31 shall be reported for each zone.

## INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

| Southeastern New Mexico | | Northwestern New Mexico | |
|---|---|---|---|
| T. Rustler 1163 | T. Lamar 4909 | T. Ojo Alamo | T. Penn A" |
| T. Salt 1545 | T. Bell Canyon 4947 | T. Kirtland | T. Penn. "B" |
| B. Salt 4674 | T. Cherry Canyon 5874 | T. Fruitland | T. Penn. "C" |
| T. Yates | T. Brushy Canyon 7311 | T. Pictured Cliffs | T. Penn. "D" |
| T. 7 Rivers | T. Top Bone Spring 8878 | T. Cliff House | T. Leadville |
| T. Queen | T. Avalon 9353 | T. Menefee | T. Madison |
| T. Grayburg | T. 1st Bone Spring Sand 9983 | T. Point Lookout | T. Elbert |
| T. San Andres | T. 2nd Bone Spring Carb 10,406 | T. Mancos | T. McCracken |
| T. Glorieta | T. 2nd Bone Spring Sand 10,622 | T. Gallup | T. Ignacio Otzte |
| T. Paddock | T. 3rd Bone Spring Carb 11,087 | Base Greenhorn | T.Granite |
| T. Blinebry | T. 3rd Bone Spring Sand 11,957 | T. Dakota | |
| T.Tubb | T. Wolfcamp 12,479 | T. Morrison | |
| T. Drinkard | T. | T.Todilto | |
| T. Abo | T. | T. Entrada | |
| T. Wolfcamp | T. | T. Wingate | |
| T. Penn | T. | T. Chinle | |
| T. Cisco (Bough C) | T. | T. Permian | |

**OIL OR GAS SANDS OR ZONES**

No. 1, from……..……..….to……. No. 3, from……to…….……

No. 2, from……to…… No. 4, from……to……..

## IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from…….to……feet……

No. 2, from…….to……feet……

No. 3, from…….to……feet……

## LITHOLOGY RECORD (Attach additional sheet if necessary)

| From | To | Thickness In Feet | Lithology | | From | To | Thickness In Feet | Lithology |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**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



## ACKNOWLEDGMENTS

| | |
|---|---|
| Operator:<br>CIMAREX ENERGY CO.<br>600 N. Marienfeld Street<br>Midland, TX 79701 | OGRID:<br>215099 |
| | Action Number:<br>66083 |
| | Action Type:<br>[C-104] Completion Packet (C-104C) |

**ACKNOWLEDGMENTS**

| | |
|---|---|
| ☑ | I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion. |
| ☑ | I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion. |

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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

CONDITIONS

Action 66083

## CONDITIONS

| | |
|---|---|
| Operator:<br>CIMAREX ENERGY CO.<br>600 N. Marienfeld Street<br>Midland, TX 79701 | OGRID:<br>215099 |
| | Action Number:<br>66083 |
| | Action Type:<br>[C-104] Completion Packet (C-104C) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| plmartinez | File 3160-4 Completion Report within 10 days to NMOCD after BLM approval. | 4/26/2022 |