

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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.5. Lease Serial No.
NMNM100332

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
DAVINCI 7-18 FEDERAL COM 30H9. API Well No.
30-015-44790-00-X110. Field and Pool or Exploratory Area
PURPLE SAGE-WOLFCAMP (GAS)11. County or Parish, State
EDDY COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on page 2**1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other2. Name of Operator Contact: FATIMA VASQUEZ
CIMAREX ENERGY COMPANY OF CO Mail: fvasquez@cimarex.com3a. Address
600 N MARIENFELD STE 600
MIDLAND, TX 797013b. Phone No. (include area code)
Ph: 432.620.19334. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 7 T25S R27E NWNE 390FNL 1430FEL
32.150780 N Lat, 104.225578 W Lon

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

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

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

Cimarex respectfully requests the following changes:

Change BHL to:
330' FSL & 1980' FEL of Section 18, 25S, 27E.

Change the completion to Bone Spring.

No new surface disturbance.

Please see attached Wellsite Layout, updated C102, updated Drilling Plan, and updated Directional Survey.

Entered 05/06/2020 - KMS NMOCD

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

**Electronic Submission #496411 verified by the BLM Well Information System
For CIMAREX ENERGY COMPANY OF CO, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 12/18/2019 (20PP0702SE)**

Name (Printed/Typed) FATIMA VASQUEZ

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 12/18/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By JEROMY PORTER

Title PETROLEUM ENGINEER

Date 12/20/2019

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 Carlsbad

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 ****

PECOS DISTRICT

DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CIMAREX ENERGY COMPANY
LEASE NO.:	NMNM100332
WELL NAME & NO.:	DAVINCI 7-18 FEDERAL COM 30H
SURFACE HOLE FOOTAGE:	390'/N & 1430'/E
BOTTOM HOLE FOOTAGE:	330'/S & 1980'/E
LOCATION:	Section 18, T.25 S., R.27 E., NMPM
COUNTY:	EDDY County, New Mexico

COA

H2S	☐ Yes	☒ No	
Potash	☒ None	☐ Secretary	☐ R-111-P
Cave/Karst Potential	☐ Low	☐ Medium	☒ High
Cave/Karst Potential	☐ Critical		
Variance	☐ None	☒ Flex Hose	☐ Other
Wellhead	☐ Conventional	☒ Multibowl	☐ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☒ COM	☐ Unit

All Previous COAs still apply, except for the following:

A. CASING

1. The 13-3/8 inch surface casing shall be set at approximately **460 feet** (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite and above the salt) and cemented to the surface. **Excess cement calculates to 14%, additional cement might 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 will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - 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 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 or potash.

*In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings , the cement on the 3rd casing string must come to surface.

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.

B. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)**
3. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **5000 (5M)** psi.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

C. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL 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

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)
393-3612

1. 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.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig

- Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. 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 are located, this does not include the dog house or stairway area.
 3. 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 Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. 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.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: 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 for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. 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. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. 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.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. 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. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. 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.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. 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. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. 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.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 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. In potash areas, 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. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
 - c. 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 (8 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).
 - d. 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.

- e. The results of the test shall be reported to the appropriate BLM office.
- f. 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.
- g. 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.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp 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.

JJP12202019

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 30015-44790	² Pool Code 97494	³ Pool Name Cottonwood Draw; Bone Spring (O)
⁴ Property Code 317791	⁵ Property Name DAVINCI 7-18 FEDERAL COM	
⁷ OGRID No. 215099	⁸ Operator Name CIMAREX ENERGY CO.	⁶ Well Number 30H
		⁹ Elevation 3308.4'

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	7	25S	27E		390	NORTH	1430	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
O	18	25S	27E		330	SOUTH	1980	EAST	EDDY
¹² Dedicated Acres 320		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

NOTE:

- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

LATITUDE = 32°09'02.80" (32.150778°)
LONGITUDE = 104°13'32.07" (104.2225575°)

LATITUDE = 32°09'02.37" (32.150638°)
LONGITUDE = 104°13'30.28" (104.2225078°)

LATITUDE = 32°09'02.75" (32.150763°)
LONGITUDE = 104°13'38.47" (104.227352°)

LATITUDE = 32°09'02.31" (32.150643°)
LONGITUDE = 104°13'36.68" (104.226855°)

LATITUDE = 32°07'24.98" (32.123604°)
LONGITUDE = 104°13'38.28" (104.227300°)

LATITUDE = 32°07'24.54" (32.123484°)
LONGITUDE = 104°13'36.49" (104.226804°)

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 has voluntarily pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *Terri Stathem* Date: 10/22/19

Printed Name: Terri Stathem

E-mail Address: tstathem@cimarex.com

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

May 11, 2017

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number:



Cimarex DaVinci 7-18 Federal Com #30H Rev2 RM 04Nov19 Proposal
Geodetic Report
(Non-Def Plan)



Report Date: November 04, 2019 - 04:22 PM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex DaVinci 7-18 Federal Com #30H / Cimarex DaVinci 7-18 Federal Com #30H
Well: Cimarex DaVinci 7-18 Federal Com #30H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex DaVinci 7-18 Federal Com #30H Rev2 RM 04Nov19
Survey Date: October 11, 2019
Tort / AHD / DDI / ERD Ratio: 106.925 ° / 10660.995 ft / 6.409 / 1.342
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 9' 2.80362", W 104° 13' 32.07065"
Location Grid N/E Y/X: N 418605.380 ftUS, E 574686.470 ftUS
CRS Grid Convergence Angle: 0.0573 °
Grid Scale Factor: 0.99991036
Version / Patch: 2.10.782.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.849 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3334.400 ft above MSL
Seabed / Ground Elevation: 3308.400 ft above MSL
Magnetic Declination: 7.221 °
Total Gravity Field Strength: 998.4344mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47767.335 nT
Magnetic Dip Angle: 59.786 °
Declination Date: November 04, 2019
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.0573 °
Total Corr Mag North->Grid North: 7.1640 °
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")		Longitude (E/W ° ' ")	
SHL [390' FNL, 1430' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	100.00	0.00	269.35	100.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	200.00	0.00	269.35	200.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	300.00	0.00	269.35	300.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	400.00	0.00	269.35	400.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	500.00	0.00	269.35	500.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	600.00	0.00	269.35	600.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	700.00	0.00	269.35	700.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	800.00	0.00	269.35	800.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	900.00	0.00	269.35	900.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	1000.00	0.00	269.35	1000.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	1100.00	0.00	269.35	1100.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	1200.00	0.00	269.35	1200.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	1300.00	0.00	269.35	1300.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
Top Salt	1334.00	0.00	269.35	1334.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	1400.00	0.00	269.35	1400.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	1500.00	0.00	269.35	1500.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	1600.00	0.00	269.35	1600.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	1700.00	0.00	269.35	1700.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	1800.00	0.00	269.35	1800.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
Base Salt	1859.00	0.00	269.35	1859.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	1900.00	0.00	269.35	1900.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07
	2000.00	0.00	269.35	2000.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9	2.80	W 104 13 32.07

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 ° ' ")
Bell Canyon (Top Delaware)	2090.00	0.00	269.35	2090.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9 2.80	W 104 13 32.07
Nudge 2°/100' DLS	2100.00	0.00	269.35	2100.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N	32 9 2.80	W 104 13 32.07
	2200.00	2.00	269.35	2199.98	0.02	-0.02	-1.75	2.00	418605.36	574684.73	N	32 9 2.80	W 104 13 32.09
	2300.00	4.00	269.35	2299.84	0.06	-0.08	-6.98	2.00	418605.30	574679.49	N	32 9 2.80	W 104 13 32.15
	2400.00	6.00	269.35	2399.45	0.14	-0.18	-15.69	2.00	418605.20	574670.78	N	32 9 2.80	W 104 13 32.25
	2500.00	8.00	269.35	2498.70	0.24	-0.32	-27.88	2.00	418605.06	574658.59	N	32 9 2.80	W 104 13 32.39
Hold Nudge	2501.86	8.04	269.35	2500.54	0.25	-0.32	-28.14	2.00	418605.06	574658.34	N	32 9 2.80	W 104 13 32.40
	2600.00	8.04	269.35	2597.72	0.37	-0.48	-41.86	0.00	418604.90	574644.62	N	32 9 2.80	W 104 13 32.56
	2700.00	8.04	269.35	2696.74	0.49	-0.64	-55.84	0.00	418604.74	574630.64	N	32 9 2.80	W 104 13 32.72
	2800.00	8.04	269.35	2795.75	0.61	-0.80	-69.82	0.00	418604.58	574616.66	N	32 9 2.80	W 104 13 32.88
	2900.00	8.04	269.35	2894.77	0.73	-0.96	-83.80	0.00	418604.42	574602.68	N	32 9 2.80	W 104 13 33.05
Cherry Canyon	2949.72	8.04	269.35	2944.00	0.80	-1.03	-90.75	0.00	418604.35	574595.73	N	32 9 2.79	W 104 13 33.13
	3000.00	8.04	269.35	2993.79	0.86	-1.11	-97.78	0.00	418604.27	574588.70	N	32 9 2.79	W 104 13 33.21
	3100.00	8.04	269.35	3092.81	0.98	-1.27	-111.76	0.00	418604.11	574574.72	N	32 9 2.79	W 104 13 33.37
	3200.00	8.04	269.35	3191.83	1.10	-1.43	-125.74	0.00	418603.95	574560.74	N	32 9 2.79	W 104 13 33.53
	3300.00	8.04	269.35	3290.84	1.22	-1.59	-139.72	0.00	418603.79	574546.76	N	32 9 2.79	W 104 13 33.70
	3400.00	8.04	269.35	3389.86	1.35	-1.75	-153.70	0.00	418603.63	574532.78	N	32 9 2.79	W 104 13 33.86
	3500.00	8.04	269.35	3488.88	1.47	-1.91	-167.68	0.00	418603.47	574518.80	N	32 9 2.79	W 104 13 34.02
	3600.00	8.04	269.35	3587.90	1.59	-2.07	-181.66	0.00	418603.31	574504.82	N	32 9 2.78	W 104 13 34.18
	3700.00	8.04	269.35	3686.91	1.71	-2.23	-195.64	0.00	418603.15	574490.84	N	32 9 2.78	W 104 13 34.35
	3800.00	8.04	269.35	3785.93	1.84	-2.39	-209.62	0.00	418602.99	574476.86	N	32 9 2.78	W 104 13 34.51
	3900.00	8.04	269.35	3884.95	1.96	-2.55	-223.60	0.00	418602.83	574462.89	N	32 9 2.78	W 104 13 34.67
	4000.00	8.04	269.35	3983.97	2.08	-2.71	-237.59	0.00	418602.67	574448.91	N	32 9 2.78	W 104 13 34.83
Brushy Canyon	4022.25	8.04	269.35	4006.00	2.11	-2.74	-240.70	0.00	418602.64	574445.80	N	32 9 2.78	W 104 13 34.87
	4100.00	8.04	269.35	4082.99	2.20	-2.87	-251.57	0.00	418602.51	574434.93	N	32 9 2.78	W 104 13 35.00
	4200.00	8.04	269.35	4182.00	2.33	-3.03	-265.55	0.00	418602.35	574420.95	N	32 9 2.78	W 104 13 35.16
	4300.00	8.04	269.35	4281.02	2.45	-3.19	-279.53	0.00	418602.19	574406.97	N	32 9 2.77	W 104 13 35.32
	4400.00	8.04	269.35	4380.04	2.57	-3.35	-293.51	0.00	418602.04	574392.99	N	32 9 2.77	W 104 13 35.48
	4500.00	8.04	269.35	4479.06	2.69	-3.50	-307.49	0.00	418601.88	574379.01	N	32 9 2.77	W 104 13 35.65
	4600.00	8.04	269.35	4578.07	2.82	-3.66	-321.47	0.00	418601.72	574365.03	N	32 9 2.77	W 104 13 35.81
	4700.00	8.04	269.35	4677.09	2.94	-3.82	-335.45	0.00	418601.56	574351.05	N	32 9 2.77	W 104 13 35.97
	4800.00	8.04	269.35	4776.11	3.06	-3.98	-349.43	0.00	418601.40	574337.07	N	32 9 2.77	W 104 13 36.14
	4900.00	8.04	269.35	4875.13	3.18	-4.14	-363.41	0.00	418601.24	574323.09	N	32 9 2.77	W 104 13 36.30
	5000.00	8.04	269.35	4974.15	3.31	-4.30	-377.39	0.00	418601.08	574309.11	N	32 9 2.76	W 104 13 36.46
	5100.00	8.04	269.35	5073.16	3.43	-4.46	-391.37	0.00	418600.92	574295.13	N	32 9 2.76	W 104 13 36.62
	5200.00	8.04	269.35	5172.18	3.55	-4.62	-405.35	0.00	418600.76	574281.16	N	32 9 2.76	W 104 13 36.79
	5300.00	8.04	269.35	5271.20	3.67	-4.78	-419.33	0.00	418600.60	574267.18	N	32 9 2.76	W 104 13 36.95
	5400.00	8.04	269.35	5370.22	3.80	-4.94	-433.31	0.00	418600.44	574253.20	N	32 9 2.76	W 104 13 37.11
	5500.00	8.04	269.35	5469.23	3.92	-5.10	-447.29	0.00	418600.28	574239.22	N	32 9 2.76	W 104 13 37.27
	5600.00	8.04	269.35	5568.25	4.04	-5.26	-461.27	0.00	418600.12	574225.24	N	32 9 2.76	W 104 13 37.44
Bone Spring	5656.30	8.04	269.35	5624.00	4.11	-5.35	-469.14	0.00	418600.03	574217.37	N	32 9 2.76	W 104 13 37.53
	5700.00	8.04	269.35	5667.27	4.16	-5.42	-475.25	0.00	418599.96	574211.26	N	32 9 2.75	W 104 13 37.60
	5800.00	8.04	269.35	5766.29	4.29	-5.58	-489.23	0.00	418599.80	574197.28	N	32 9 2.75	W 104 13 37.76
	5900.00	8.04	269.35	5865.31	4.41	-5.74	-503.22	0.00	418599.65	574183.30	N	32 9 2.75	W 104 13 37.92
	6000.00	8.04	269.35	5964.32	4.53	-5.89	-517.20	0.00	418599.49	574169.32	N	32 9 2.75	W 104 13 38.09
Drop to Vertical 2°/100' DLS	6036.03	8.04	269.35	6000.00	4.58	-5.95	-522.23	0.00	418599.43	574164.28	N	32 9 2.75	W 104 13 38.14
	6100.00	6.76	269.35	6063.44	4.65	-6.05	-530.47	2.00	418599.33	574156.05	N	32 9 2.75	W 104 13 38.24
	6200.00	4.76	269.35	6162.93	4.74	-6.16	-540.50	2.00	418599.22	574146.02	N	32 9 2.75	W 104 13 38.36
	6300.00	2.76	269.35	6262.71	4.79	-6.24	-547.05	2.00	418599.15	574139.47	N	32 9 2.75	W 104 13 38.43
	6400.00	0.76	269.35	6362.65	4.82	-6.27	-550.12	2.00	418599.11	574136.40	N	32 9 2.75	W 104 13 38.47
Hold Vertical	6437.89	0.00	269.35	6400.54	4.82	-6.27	-550.37	2.00	418599.11	574136.15	N	32 9 2.75	W 104 13 38.47

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 ° ' ")
1st Bone Spring Sand	6500.00	0.00	269.35	6462.65	4.82	-6.27	-550.37	0.00	418599.11	574136.15	N	32 9 2.75	W 104 13 38.47
	6572.35	0.00	269.35	6535.00	4.82	-6.27	-550.37	0.00	418599.11	574136.15	N	32 9 2.75	W 104 13 38.47
	6600.00	0.00	269.35	6562.65	4.82	-6.27	-550.37	0.00	418599.11	574136.15	N	32 9 2.75	W 104 13 38.47
	6700.00	0.00	269.35	6662.65	4.82	-6.27	-550.37	0.00	418599.11	574136.15	N	32 9 2.75	W 104 13 38.47
	6800.00	0.00	269.35	6762.65	4.82	-6.27	-550.37	0.00	418599.11	574136.15	N	32 9 2.75	W 104 13 38.47
	6900.00	0.00	269.35	6862.65	4.82	-6.27	-550.37	0.00	418599.11	574136.15	N	32 9 2.75	W 104 13 38.47
	7000.00	0.00	269.35	6962.65	4.82	-6.27	-550.37	0.00	418599.11	574136.15	N	32 9 2.75	W 104 13 38.47
2nd Bone Spring Sand	7100.00	0.00	269.35	7062.65	4.82	-6.27	-550.37	0.00	418599.11	574136.15	N	32 9 2.75	W 104 13 38.47
	7146.35	0.00	269.35	7109.00	4.82	-6.27	-550.37	0.00	418599.11	574136.15	N	32 9 2.75	W 104 13 38.47
	7200.00	0.00	269.35	7162.65	4.82	-6.27	-550.37	0.00	418599.11	574136.15	N	32 9 2.75	W 104 13 38.47
	7300.00	0.00	269.35	7262.65	4.82	-6.27	-550.37	0.00	418599.11	574136.15	N	32 9 2.75	W 104 13 38.47
	7400.00	0.00	269.35	7362.65	4.82	-6.27	-550.37	0.00	418599.11	574136.15	N	32 9 2.75	W 104 13 38.47
	7500.00	0.00	269.35	7462.65	4.82	-6.27	-550.37	0.00	418599.11	574136.15	N	32 9 2.75	W 104 13 38.47
	KOP - Build 12°/100' DLS	7501.93	0.00	269.35	7464.59	4.82	-6.27	-550.37	0.00	418599.11	574136.15	N	32 9 2.75
3rd Bone Spring Carb	7512.35	1.25	179.85	7475.00	4.94	-6.39	-550.37	12.00	418598.99	574136.15	N	32 9 2.75	W 104 13 38.47
Harkey Sand	7600.00	11.77	179.85	7561.97	14.86	-16.31	-550.34	12.00	418589.07	574136.18	N	32 9 2.65	W 104 13 38.47
	7700.00	23.77	179.85	7657.02	45.32	-46.77	-550.26	12.00	418558.62	574136.26	N	32 9 2.35	W 104 13 38.47
	7800.00	35.77	179.85	7743.67	94.88	-96.33	-550.13	12.00	418509.06	574136.39	N	32 9 1.86	W 104 13 38.47
	7892.45	46.86	179.85	7813.00	155.82	-157.27	-549.97	12.00	418448.13	574136.55	N	32 9 1.25	W 104 13 38.47
	7900.00	47.77	179.85	7818.12	161.37	-162.82	-549.96	12.00	418442.58	574136.56	N	32 9 1.20	W 104 13 38.47
	8000.00	59.77	179.85	7877.11	241.88	-243.33	-549.75	12.00	418362.07	574136.78	N	32 9 0.40	W 104 13 38.47
	8100.00	71.77	179.85	7918.08	332.90	-334.35	-549.51	12.00	418271.06	574137.02	N	32 8 59.50	W 104 13 38.47
8200.00	83.77	179.85	7939.23	430.46	-431.90	-549.25	12.00	418173.52	574137.27	N	32 8 58.54	W 104 13 38.46	
Harkey Sand Target	8244.85	89.15	179.85	7942.00	475.20	-476.65	-549.13	12.00	418128.78	574137.39	N	32 8 58.09	W 104 13 38.46
Harkey Sand Target	8259.03	90.85	179.85	7942.00	489.38	-490.83	-549.09	12.00	418114.60	574137.43	N	32 8 57.95	W 104 13 38.46
Landing Point	8300.00	90.85	179.85	7941.39	530.35	-531.80	-548.99	0.00	418073.63	574137.54	N	32 8 57.55	W 104 13 38.46
	8400.00	90.85	179.85	7939.91	630.34	-631.79	-548.72	0.00	417973.65	574137.80	N	32 8 56.56	W 104 13 38.46
	8500.00	90.85	179.85	7938.42	730.33	-731.77	-548.46	0.00	417873.67	574138.06	N	32 8 55.57	W 104 13 38.46
	8600.00	90.85	179.85	7936.94	830.31	-831.76	-548.19	0.00	417773.69	574138.33	N	32 8 54.58	W 104 13 38.46
	8700.00	90.85	179.85	7935.45	930.30	-931.75	-547.93	0.00	417673.71	574138.59	N	32 8 53.59	W 104 13 38.45
	8800.00	90.85	179.85	7933.96	1030.29	-1031.74	-547.67	0.00	417573.73	574138.85	N	32 8 52.60	W 104 13 38.45
	8900.00	90.85	179.85	7932.48	1130.28	-1131.73	-547.40	0.00	417473.76	574139.12	N	32 8 51.61	W 104 13 38.45
	9000.00	90.85	179.85	7930.99	1230.27	-1231.72	-547.14	0.00	417373.78	574139.38	N	32 8 50.62	W 104 13 38.45
	9100.00	90.85	179.85	7929.51	1330.26	-1331.71	-546.88	0.00	417273.80	574139.64	N	32 8 49.63	W 104 13 38.45
	9200.00	90.85	179.85	7928.02	1430.25	-1431.69	-546.61	0.00	417173.82	574139.91	N	32 8 48.64	W 104 13 38.44
	9300.00	90.85	179.85	7926.54	1530.24	-1531.68	-546.35	0.00	417073.84	574140.17	N	32 8 47.65	W 104 13 38.44
	9400.00	90.85	179.85	7925.05	1630.23	-1631.67	-546.09	0.00	416973.86	574140.43	N	32 8 46.66	W 104 13 38.44
	9500.00	90.85	179.85	7923.57	1730.22	-1731.66	-545.82	0.00	416873.88	574140.70	N	32 8 45.67	W 104 13 38.44
	9600.00	90.85	179.85	7922.08	1830.20	-1831.65	-545.56	0.00	416773.90	574140.96	N	32 8 44.68	W 104 13 38.44
	9700.00	90.85	179.85	7920.60	1930.19	-1931.64	-545.30	0.00	416673.92	574141.22	N	32 8 43.69	W 104 13 38.44
	9800.00	90.85	179.85	7919.11	2030.18	-2031.63	-545.03	0.00	416573.94	574141.49	N	32 8 42.71	W 104 13 38.43
	9900.00	90.85	179.85	7917.63	2130.17	-2131.61	-544.77	0.00	416473.96	574141.75	N	32 8 41.72	W 104 13 38.43
	10000.00	90.85	179.85	7916.14	2230.16	-2231.60	-544.51	0.00	416373.98	574142.01	N	32 8 40.73	W 104 13 38.43
	10100.00	90.85	179.85	7914.65	2330.15	-2331.59	-544.24	0.00	416274.00	574142.28	N	32 8 39.74	W 104 13 38.43
	10200.00	90.85	179.85	7913.17	2430.14	-2431.58	-543.98	0.00	416174.02	574142.54	N	32 8 38.75	W 104 13 38.43
	10300.00	90.85	179.85	7911.68	2530.13	-2531.57	-543.72	0.00	416074.04	574142.80	N	32 8 37.76	W 104 13 38.42
	10400.00	90.85	179.85	7910.20	2630.12	-2631.56	-543.45	0.00	415974.06	574143.07	N	32 8 36.77	W 104 13 38.42

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 ° ' ")
	10500.00	90.85	179.85	7908.71	2730.11	-2731.55	-543.19	0.00	415874.08	574143.33	N 32 8 35.78	W 104 13 38.42
	10600.00	90.85	179.85	7907.23	2830.09	-2831.53	-542.93	0.00	415774.10	574143.59	N 32 8 34.79	W 104 13 38.42
	10700.00	90.85	179.85	7905.74	2930.08	-2931.52	-542.66	0.00	415674.13	574143.86	N 32 8 33.80	W 104 13 38.42
	10800.00	90.85	179.85	7904.26	3030.07	-3031.51	-542.40	0.00	415574.15	574144.12	N 32 8 32.81	W 104 13 38.41
	10900.00	90.85	179.85	7902.77	3130.06	-3131.50	-542.13	0.00	415474.17	574144.38	N 32 8 31.82	W 104 13 38.41
	11000.00	90.85	179.85	7901.29	3230.05	-3231.49	-541.87	0.00	415374.19	574144.65	N 32 8 30.83	W 104 13 38.41
	11100.00	90.85	179.85	7899.80	3330.04	-3331.48	-541.61	0.00	415274.21	574144.91	N 32 8 29.84	W 104 13 38.41
	11200.00	90.85	179.85	7898.32	3430.03	-3431.47	-541.34	0.00	415174.23	574145.18	N 32 8 28.85	W 104 13 38.41
	11300.00	90.85	179.85	7896.83	3530.02	-3531.46	-541.08	0.00	415074.25	574145.44	N 32 8 27.86	W 104 13 38.40
	11400.00	90.85	179.85	7895.34	3630.01	-3631.44	-540.82	0.00	414974.27	574145.70	N 32 8 26.87	W 104 13 38.40
	11500.00	90.85	179.85	7893.86	3729.99	-3731.43	-540.55	0.00	414874.29	574145.97	N 32 8 25.89	W 104 13 38.40
	11600.00	90.85	179.85	7892.37	3829.98	-3831.42	-540.29	0.00	414774.31	574146.23	N 32 8 24.90	W 104 13 38.40
	11700.00	90.85	179.85	7890.89	3929.97	-3931.41	-540.03	0.00	414674.33	574146.49	N 32 8 23.91	W 104 13 38.40
	11800.00	90.85	179.85	7889.40	4029.96	-4031.40	-539.76	0.00	414574.35	574146.76	N 32 8 22.92	W 104 13 38.39
	11900.00	90.85	179.85	7887.92	4129.95	-4131.39	-539.50	0.00	414474.37	574147.02	N 32 8 21.93	W 104 13 38.39
	12000.00	90.85	179.85	7886.43	4229.94	-4231.38	-539.24	0.00	414374.39	574147.28	N 32 8 20.94	W 104 13 38.39
	12100.00	90.85	179.85	7884.95	4329.93	-4331.36	-538.97	0.00	414274.41	574147.55	N 32 8 19.95	W 104 13 38.39
	12200.00	90.85	179.85	7883.46	4429.92	-4431.35	-538.71	0.00	414174.43	574147.81	N 32 8 18.96	W 104 13 38.39
	12300.00	90.85	179.85	7881.98	4529.91	-4531.34	-538.45	0.00	414074.45	574148.07	N 32 8 17.97	W 104 13 38.39
	12400.00	90.85	179.85	7880.49	4629.90	-4631.33	-538.18	0.00	413974.47	574148.34	N 32 8 16.98	W 104 13 38.38
	12500.00	90.85	179.85	7879.00	4729.88	-4731.32	-537.92	0.00	413874.49	574148.60	N 32 8 15.99	W 104 13 38.38
	12600.00	90.85	179.85	7877.52	4829.87	-4831.31	-537.66	0.00	413774.52	574148.86	N 32 8 15.00	W 104 13 38.38
	12700.00	90.85	179.85	7876.03	4929.86	-4931.30	-537.39	0.00	413674.54	574149.13	N 32 8 14.01	W 104 13 38.38
	12800.00	90.85	179.85	7874.55	5029.85	-5031.28	-537.13	0.00	413574.56	574149.39	N 32 8 13.02	W 104 13 38.38
	12900.00	90.85	179.85	7873.06	5129.84	-5131.27	-536.87	0.00	413474.58	574149.65	N 32 8 12.03	W 104 13 38.37
	13000.00	90.85	179.85	7871.58	5229.83	-5231.26	-536.60	0.00	413374.60	574149.92	N 32 8 11.04	W 104 13 38.37
	13100.00	90.85	179.85	7870.09	5329.82	-5331.25	-536.34	0.00	413274.62	574150.18	N 32 8 10.05	W 104 13 38.37
	13200.00	90.85	179.85	7868.61	5429.81	-5431.24	-536.07	0.00	413174.64	574150.44	N 32 8 9.07	W 104 13 38.37
	13300.00	90.85	179.85	7867.12	5529.80	-5531.23	-535.81	0.00	413074.66	574150.71	N 32 8 8.08	W 104 13 38.37
	13400.00	90.85	179.85	7865.64	5629.79	-5631.22	-535.55	0.00	412974.68	574150.97	N 32 8 7.09	W 104 13 38.36
	13500.00	90.85	179.85	7864.15	5729.77	-5731.20	-535.28	0.00	412874.70	574151.23	N 32 8 6.10	W 104 13 38.36
	13600.00	90.85	179.85	7862.67	5829.76	-5831.19	-535.02	0.00	412774.72	574151.50	N 32 8 5.11	W 104 13 38.36
	13700.00	90.85	179.85	7861.18	5929.75	-5931.18	-534.76	0.00	412674.74	574151.76	N 32 8 4.12	W 104 13 38.36
	13800.00	90.85	179.85	7859.69	6029.74	-6031.17	-534.49	0.00	412574.76	574152.03	N 32 8 3.13	W 104 13 38.36
	13900.00	90.85	179.85	7858.21	6129.73	-6131.16	-534.23	0.00	412474.78	574152.29	N 32 8 2.14	W 104 13 38.35
	14000.00	90.85	179.85	7856.72	6229.72	-6231.15	-533.97	0.00	412374.80	574152.55	N 32 8 1.15	W 104 13 38.35
	14100.00	90.85	179.85	7855.24	6329.71	-6331.14	-533.70	0.00	412274.82	574152.82	N 32 8 0.16	W 104 13 38.35
	14200.00	90.85	179.85	7853.75	6429.70	-6431.13	-533.44	0.00	412174.84	574153.08	N 32 7 59.17	W 104 13 38.35
	14300.00	90.85	179.85	7852.27	6529.69	-6531.11	-533.18	0.00	412074.86	574153.34	N 32 7 58.18	W 104 13 38.35
	14400.00	90.85	179.85	7850.78	6629.67	-6631.10	-532.91	0.00	411974.89	574153.61	N 32 7 57.19	W 104 13 38.35
	14500.00	90.85	179.85	7849.30	6729.66	-6731.09	-532.65	0.00	411874.91	574153.87	N 32 7 56.20	W 104 13 38.34
	14600.00	90.85	179.85	7847.81	6829.65	-6831.08	-532.39	0.00	411774.93	574154.13	N 32 7 55.21	W 104 13 38.34
	14700.00	90.85	179.85	7846.33	6929.64	-6931.07	-532.12	0.00	411674.95	574154.40	N 32 7 54.22	W 104 13 38.34
	14800.00	90.85	179.85	7844.84	7029.63	-7031.06	-531.86	0.00	411574.97	574154.66	N 32 7 53.23	W 104 13 38.34
	14900.00	90.85	179.85	7843.36	7129.62	-7131.05	-531.60	0.00	411474.99	574154.92	N 32 7 52.25	W 104 13 38.34
	15000.00	90.85	179.85	7841.87	7229.61	-7231.03	-531.33	0.00	411375.01	574155.19	N 32 7 51.26	W 104 13 38.33
	15100.00	90.85	179.85	7840.38	7329.60	-7331.02	-531.07	0.00	411275.03	574155.45	N 32 7 50.27	W 104 13 38.33
	15200.00	90.85	179.85	7838.90	7429.59	-7431.01	-530.81	0.00	411175.05	574155.71	N 32 7 49.28	W 104 13 38.33
	15300.00	90.85	179.85	7837.41	7529.58	-7531.00	-530.54	0.00	411075.07	574155.98	N 32 7 48.29	W 104 13 38.33
	15400.00	90.85	179.85	7835.93	7629.56	-7630.99	-530.28	0.00	410975.09	574156.24	N 32 7 47.30	W 104 13 38.33
	15500.00	90.85	179.85	7834.44	7729.55	-7730.98	-530.01	0.00	410875.11	574156.50	N 32 7 46.31	W 104 13 38.32
	15600.00	90.85	179.85	7832.96	7829.54	-7830.97	-529.75	0.00	410775.13	574156.77	N 32 7 45.32	W 104 13 38.32
	15700.00	90.85	179.85	7831.47	7929.53	-7930.95	-529.49	0.00	410675.15	574157.03	N 32 7 44.33	W 104 13 38.32
	15800.00	90.85	179.85	7829.99	8029.52	-8030.94	-529.22	0.00	410575.17	574157.29	N 32 7 43.34	W 104 13 38.32

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 ° ' ")
Harkey Sand	15900.00	90.85	179.85	7828.50	8129.51	-8130.93	-528.96	0.00	410475.19	574157.56	N 32 7 42.35	W 104 13 38.32
	16000.00	90.85	179.85	7827.02	8229.50	-8230.92	-528.70	0.00	410375.21	574157.82	N 32 7 41.36	W 104 13 38.31
	16100.00	90.85	179.85	7825.53	8329.49	-8330.91	-528.43	0.00	410275.23	574158.08	N 32 7 40.37	W 104 13 38.31
	16200.00	90.85	179.85	7824.05	8429.48	-8430.90	-528.17	0.00	410175.26	574158.35	N 32 7 39.38	W 104 13 38.31
	16300.00	90.85	179.85	7822.56	8529.47	-8530.89	-527.91	0.00	410075.28	574158.61	N 32 7 38.39	W 104 13 38.31
	16400.00	90.85	179.85	7821.07	8629.45	-8630.87	-527.64	0.00	409975.30	574158.87	N 32 7 37.40	W 104 13 38.31
	16500.00	90.85	179.85	7819.59	8729.44	-8730.86	-527.38	0.00	409875.32	574159.14	N 32 7 36.41	W 104 13 38.30
	16600.00	90.85	179.85	7818.10	8829.43	-8830.85	-527.12	0.00	409775.34	574159.40	N 32 7 35.43	W 104 13 38.30
	16700.00	90.85	179.85	7816.62	8929.42	-8930.84	-526.85	0.00	409675.36	574159.67	N 32 7 34.44	W 104 13 38.30
	16800.00	90.85	179.85	7815.13	9029.41	-9030.83	-526.59	0.00	409575.38	574159.93	N 32 7 33.45	W 104 13 38.30
	16900.00	90.85	179.85	7813.65	9129.40	-9130.82	-526.33	0.00	409475.40	574160.19	N 32 7 32.46	W 104 13 38.30
	16943.61	90.85	179.85	7813.00	9173.00	-9174.42	-526.21	0.00	409431.80	574160.31	N 32 7 32.03	W 104 13 38.30
	17000.00	90.85	179.85	7812.16	9229.39	-9230.81	-526.06	0.00	409375.42	574160.46	N 32 7 31.47	W 104 13 38.30
	17100.00	90.85	179.85	7810.68	9329.38	-9330.80	-525.80	0.00	409275.44	574160.72	N 32 7 30.48	W 104 13 38.29
	17200.00	90.85	179.85	7809.19	9429.37	-9430.78	-525.54	0.00	409175.46	574160.98	N 32 7 29.49	W 104 13 38.29
	17300.00	90.85	179.85	7807.71	9529.35	-9530.77	-525.27	0.00	409075.48	574161.25	N 32 7 28.50	W 104 13 38.29
	17400.00	90.85	179.85	7806.22	9629.34	-9630.76	-525.01	0.00	408975.50	574161.51	N 32 7 27.51	W 104 13 38.29
	17500.00	90.85	179.85	7804.74	9729.33	-9730.75	-524.75	0.00	408875.52	574161.77	N 32 7 26.52	W 104 13 38.29
	17600.00	90.85	179.85	7803.25	9829.32	-9830.74	-524.48	0.00	408775.54	574162.04	N 32 7 25.53	W 104 13 38.28
	17700.00	90.85	179.85	7801.76	9929.31	-9930.73	-524.22	0.00	408675.56	574162.30	N 32 7 24.54	W 104 13 38.28
	17800.00	90.85	179.85	7800.28	10029.30	-10030.72	-523.95	0.00	408575.58	574162.56	N 32 7 23.55	W 104 13 38.28

Cimarex DaVinci
7-18 Federal
Com #30H -
PBHL [100' FSL,
1980' FEL]

17886.12 90.85 179.85 7799.00 10115.41 -10116.83 -523.73 0.00 408489.48 574162.79 N 32 7 22.70 W 104 13 38.28

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	26.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Original Borehole / Cimarex DaVinci 7-18 Federal Com #30H Rev2 RM 04Nov19
	1	26.000	17886.121	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Original Borehole / Cimarex DaVinci 7-18 Federal Com #30H



Cimarex DaVinci 7-18 Federal Com #30H Rev2 RM 04Nov19 Proposal

Geodetic Report

(Non-Def Plan)



Report Date: November 04, 2019 - 04:22 PM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex DaVinci 7-18 Federal Com #30H / Cimarex DaVinci 7-18 Federal Com #30H
Well: Cimarex DaVinci 7-18 Federal Com #30H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex DaVinci 7-18 Federal Com #30H Rev2 RM 04Nov19
Survey Date: October 11, 2019
Tort / AHD / DDI / ERD Ratio: 106.925 ° / 10660.995 ft / 6.409 / 1.342
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 9' 2.80362", W 104° 13' 32.07065"
Location Grid N/E Y/X: N 418605.380 ftUS, E 574686.470 ftUS
CRS Grid Convergence Angle: 0.0573 °
Grid Scale Factor: 0.99991036
Version / Patch: 2.10.782.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.849 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3334.400 ft above MSL
Seabed / Ground Elevation: 3308.400 ft above MSL
Magnetic Declination: 7.221 °
Total Gravity Field Strength: 998.4344mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47767.335 nT
Magnetic Dip Angle: 59.786 °
Declination Date: November 04, 2019
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.0573 °
Total Corr Mag North->Grid North: 7.1640 °
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL [390' FNL, 1430' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	418605.38	574686.47	N 32 9 2.80	W 104 13 32.07
Nudge 2°/100' DLS	2100.00	0.00	269.35	2100.00	0.00	0.00	0.00	0.00	418605.38	574686.47	N 32 9 2.80	W 104 13 32.07
Hold Nudge	2501.86	8.04	269.35	2500.54	0.25	-0.32	-28.14	2.00	418605.06	574658.34	N 32 9 2.80	W 104 13 32.40
Drop to Vertical 2°/100' DLS	6036.03	8.04	269.35	6000.00	4.58	-5.95	-522.23	0.00	418599.43	574164.28	N 32 9 2.75	W 104 13 38.14
Hold Vertical	6437.89	0.00	269.35	6400.54	4.82	-6.27	-550.37	2.00	418599.11	574136.15	N 32 9 2.75	W 104 13 38.47
KOP - Build 12°/100' DLS	7501.93	0.00	269.35	7464.59	4.82	-6.27	-550.37	0.00	418599.11	574136.15	N 32 9 2.75	W 104 13 38.47
Landing Point	8259.03	90.85	179.85	7942.00	489.38	-490.83	-549.09	12.00	418114.60	574137.43	N 32 8 57.95	W 104 13 38.46
Cimarex DaVinci 7-18 Federal Com #30H - PBHL [100' FSL, 1980' FEL]	17886.12	90.85	179.85	7799.00	10115.41	-10116.83	-523.73	0.00	408489.48	574162.79	N 32 7 22.70	W 104 13 38.28

Survey Type: Non-Def Plan

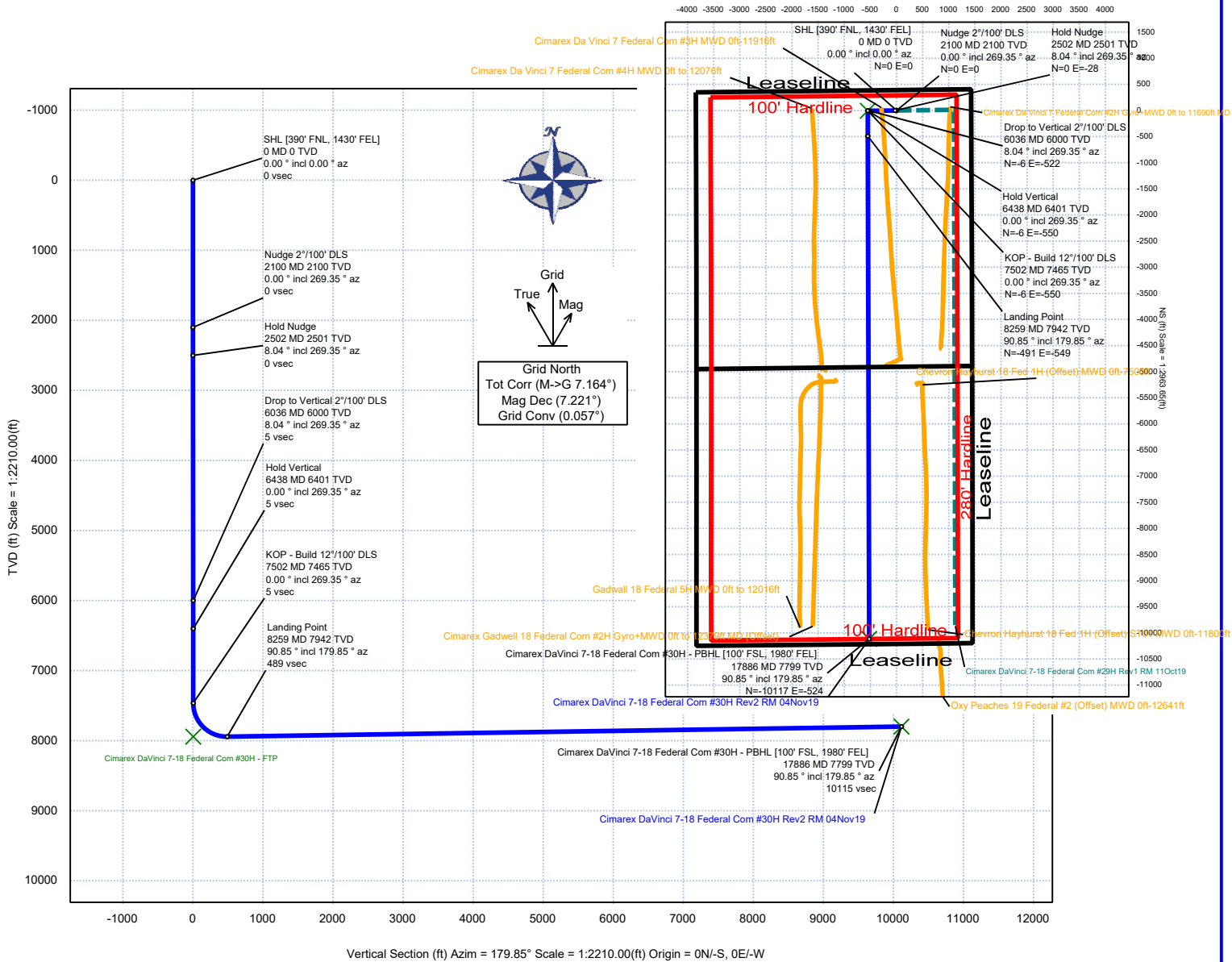
Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Survey Error Model:	ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma											
Survey Program:												

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Original Borehole / Cimarex DaVinci 7-18 Federal Com #30H Rev2 RM 04Nov19
	1	26.000	17886.121	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Original Borehole / Cimarex DaVinci 7-18 Federal Com #30H

Borehole:	Well:	Field:	Structure:
Original Borehole	Cimarex DaVinci 7-18 Federal Com #30H	NM Eddy County (NAD 83)	Cimarex DaVinci 7-18 Federal Com #30H

Gravity & Magnetic Parameters				Surface Location				Miscellaneous			
Model:	HDGM 2019	Dip:	59.786°	Date:	04-Nov-2019	Lat:	N 32 9 2.80	Northing:	418605.38FUS	Grid Conv:	0.0573°
MagDec:	7.221°	FS:	47767.335nT	Gravity FS:	998.434mgm (9.80665 Based)	Lon:	W 104 13 32.07	Easting:	574686.47FUS	Scale Fact:	0.99991036
								Plan: Cimarex DaVinci 7-18 Federal Com #30H Rev2 RM 04Nov19			

EW (ft) Scale = 1:2963.65(R)



Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [390' FNL, 1430' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Nudge 2 1/2' 100' DLS	2100.00	0.00	269.35	2100.00	0.00	0.00	0.00	0.00
Hold Nudge	2501.86	8.04	269.35	2500.54	0.25	-0.32	-28.14	2.00
Drop to Vertical 2 1/2' 100' DLS	6036.03	8.04	269.35	6000.00	4.58	-5.95	-522.23	0.00
Hold Vertical	6437.89	0.00	269.35	6400.54	4.82	-6.27	-550.37	2.00
KOP - Build 12 1/2' 100' DLS	7501.93	0.00	269.35	7464.59	4.82	-6.27	-550.37	0.00
Landing Point	8259.03	90.85	179.85	7942.00	489.38	-490.83	-549.09	12.00
Cimarex DaVinci 7-18 Federal Com #30H - PBHL [100' FSL, 1980' FEL]	17886.12	90.85	179.85	7799.00	10115.41	-10116.83	-523.73	0.00

Cimarex DaVinci 7-18 Federal Com #30H Rev2 RM 04Nov19 Anti-Collision Summary Report

Analysis Date-24hr Time: November 21, 2019 - 14:46

Client: Cimarex

Field: NM Eddy County (NAD 83)

Structure: Cimarex DaVinci 7-18 Federal Com #30H

Slot: Cimarex DaVinci 7-18 Federal Com #30H

Well: Cimarex DaVinci 7-18 Federal Com #30H

Borehole: Original Borehole

Scan MD Range: 0.00ft ~ 17886.12ft

Analysis Method: 3D Least Distance

Reference Trajectory: Cimarex DaVinci 7-18 Federal Com #30H Rev2 RM 04Nov19 (Def Plan)

Depth Interval: Every 10.00 Measured Depth (ft)

Rule Set: NAL Procedure: D&M AntiCollision Standard S002

Min Pts: All local minima indicated.

Version / Patch: 2.10.782.0

Database \ Project: US1153APP452.dir.slb.com\drilling-NM Eddy County 2.10

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

Offset Trajectories Summary

Offset Selection Criteria

Wellhead distance scan: Not performed!

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

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

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

Results highlighted: Sep-Factor separation <= 1.50 ft

Cimarex DaVinci 7-18 Federal
Com #29H Rev1 RM 11Oct19
(Def Plan)

Fail Minor

19.97	16.24	18.69	3.74	N/A	MAS = 4.95 (m)	0.00	0.00	CtCt<=15m<15.00				Enter Alert	
19.97	16.24	18.69	3.74	16821.97	MAS = 4.95 (m)	26.00	26.00					WRP	
19.97	20.02	6.20	-0.04	1.50	OSF1.50	2050.00	2050.00		OSF<1.50			Enter Minor	
19.97	20.49	5.89	-0.52	1.46	OSF1.50	2100.00	2100.00					MinPt-CtCt	
19.99	20.56	5.86	-0.57	1.46	OSF1.50	2110.00	2110.00					MINPT-O-EOU	
20.04	20.63	5.86	-0.59	1.45	OSF1.50	2120.00	2120.00					MinPts	
20.83	20.99	6.41	-0.16	1.49	OSF1.50	2170.00	2169.99		OSF>1.50			Exit Minor	
69.95	22.15	54.75	47.80	4.94	OSF1.50	2570.00	2568.01	OSF>5.00				Exit Alert	
1406.08	52.83	1370.43	1353.25	40.88	OSF1.50	7501.93	7464.59					MinPt-O-SF	
2439.67	307.88	2233.99	2131.79	11.93	OSF1.50	17650.00	7802.51					MINPT-O-EOU	
2439.82	308.09	2234.00	2131.74	11.92	OSF1.50	17660.00	7802.36					MinPt-O-ADP	
2447.07	310.17	2239.86	2136.96	11.88	OSF1.50	17810.00	7800.13					MinPt-O-SF	
2454.25	310.79	2246.63	2143.46	11.89	OSF1.50	17886.12	7799.00					TD	

Cimarex Da Vinci 7 Federal
Com #3H MWD 0ft-11916ft
(Def Survey)

Warning Alert

4904.84	32.81	4902.86	4872.03	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
4904.41	32.81	4902.37	4871.60	76868.32	MAS = 10.00 (m)	26.00	26.00					MinPt-O-SF	
4839.58	32.81	4824.37	4806.77	366.72	MAS = 10.00 (m)	2200.00	2199.98					MinPt-O-SF	
512.05	158.60	405.65	353.44	4.89	OSF1.50	6990.00	6952.65	OSF<5.00				Enter Alert	
264.28	256.67	92.51	7.61	1.54	OSF1.50	7430.00	7392.65					MinPts	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
518.33	157.88	412.42	360.45	4.97	OSF1.50	7910.00	7824.76	OSF>5.00				Exit Alert	
642.76	129.29	555.91	513.47	7.55	OSF1.50	8690.00	7935.60					MinPt-CtCt	
641.78	124.97	557.80	516.80	7.80	OSF1.50	8900.00	7932.48					MinPt-CtCt	
759.50	92.92	696.89	666.58	12.50	OSF1.50	12050.00	7885.69					MinPt-O-SF	
5453.49	54.96	5416.19	5398.53	154.35	OSF1.50	17886.12	7799.00					TD	

Cimarex Gadwell 18 Federal
Com #2H Gyro+MWD 0ft to
12379ft MD (Offset) (Def
Survey)

Warning Alert

5298.44	32.81	5296.46	5265.63	N/A	MAS = 10.00 (m)	0.00	0.00	Surface					
5297.92	32.81	5295.86	5265.11	66171.35	MAS = 10.00 (m)	26.00	26.00	MinPt-O-SF					
5297.10	32.81	5294.86	5264.29	20905.46	MAS = 10.00 (m)	120.00	120.00	MinPts					
5297.49	32.81	5294.48	5264.68	5164.76	MAS = 10.00 (m)	280.00	280.00	MINPT-O-EOU					
5300.28	32.81	5293.69	5267.47	1149.11	MAS = 10.00 (m)	1080.00	1080.00	MinPts					
5170.39	34.97	5146.38	5135.43	235.95	OSF1.50	5900.00	5865.31	MinPt-O-SF					
5160.60	35.73	5136.07	5124.88	230.36	OSF1.50	6100.00	6063.44	MinPt-O-SF					
5157.53	34.89	5133.59	5122.65	235.65	OSF1.50	6260.00	6222.77	MinPt-O-ADP					
5157.49	34.84	5133.58	5122.65	235.97	OSF1.50	6270.00	6232.75	MINPT-O-EOU					
5157.45	34.74	5133.60	5122.71	236.64	OSF1.50	6290.00	6252.72	MinPt-CtCt					
5156.23	39.18	5129.45	5117.06	207.99	OSF1.50	7690.00	7647.83	MinPt-O-SF					
909.60	123.74	826.19	785.86	11.24	OSF1.50	13050.00	7870.84	MinPt-CtCt					
909.77	124.48	825.90	785.30	11.17	OSF1.50	13080.00	7870.39	MINPT-O-EOU					
910.13	124.94	825.96	785.19	11.13	OSF1.50	13100.00	7870.09	MinPt-O-ADP					
913.29	130.23	825.55	783.06	10.71	OSF1.50	13320.00	7866.82	MinPt-CtCt					
914.11	132.45	824.93	781.66	10.53	OSF1.50	13390.00	7865.78	MINPT-O-EOU					
916.61	135.69	825.29	780.92	10.30	OSF1.50	13490.00	7864.30	MinPt-O-ADP					
921.40	140.54	826.85	780.86	9.99	OSF1.50	13630.00	7862.22	MinPt-O-ADP					
937.92	154.73	833.92	783.19	9.22	OSF1.50	14010.00	7856.58	MinPt-O-ADP					
978.93	186.91	853.50	792.02	7.94	OSF1.50	14780.00	7845.14	MinPt-O-ADP					
989.98	202.22	854.32	787.76	7.42	OSF1.50	15110.00	7840.24	MINPT-O-EOU					
994.86	208.42	855.09	786.44	7.23	OSF1.50	15250.00	7838.16	MinPt-O-ADP					
1006.53	220.69	858.59	785.85	6.90	OSF1.50	15510.00	7834.29	MinPt-O-ADP					
1033.03	256.03	861.51	777.00	6.10	OSF1.50	16220.00	7823.75	MINPT-O-EOU					
1035.23	258.62	862.02	776.62	6.05	OSF1.50	16280.00	7822.86	MinPt-O-ADP					
1044.91	269.08	864.73	775.83	5.86	OSF1.50	16490.00	7819.74	MinPt-O-ADP					
1058.25	289.92	864.14	768.32	5.51	OSF1.50	16890.00	7813.80	MINPT-O-EOU					
1066.57	305.34	862.19	761.22	5.27	OSF1.50	17190.00	7809.34	MINPT-O-EOU					
1082.60	326.73	863.97	755.87	5.00	OSF1.50	17600.00	7803.25	OSF<5.00				Enter Alert	
1084.88	330.53	863.72	754.35	4.95	OSF1.50	17670.00	7802.21	MinPts					
1085.66	330.98	864.22	754.68	4.94	OSF1.50	17690.00	7801.91	MinPt-O-SF					
1097.94	330.81	876.74	767.13	5.00	OSF1.50	17810.00	7800.13	OSF>5.00				Exit Alert	
1112.39	329.01	892.39	783.39	5.09	OSF1.50	17886.12	7799.00	TD					

Cimarex Da Vinci 7 Federal
Com #4H MWD 0ft to 12076ft
(Def Survey)

Pass

5166.37	32.81	5164.39	5133.56	N/A	MAS = 10.00 (m)	0.00	0.00	Surface					
5165.84	32.81	5163.78	5133.03	63593.43	MAS = 10.00 (m)	26.00	26.00	MinPt-O-SF					
5148.54	32.81	5137.93	5115.73	596.36	MAS = 10.00 (m)	1930.00	1930.00	MinPts					
5148.68	32.81	5137.81	5115.87	579.18	MAS = 10.00 (m)	1990.00	1990.00	MINPT-O-EOU					
1064.73	255.92	893.24	808.81	6.29	OSF1.50	7360.00	7322.65	MinPts					
1064.74	255.92	893.25	808.82	6.29	OSF1.50	7370.00	7332.65	MinPt-O-SF					
1155.39	184.39	1031.81	971.00	9.48	OSF1.50	8810.00	7933.82	MinPt-O-ADP					

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
1146.43	176.47	1028.12	969.96	9.84		OSF1.50	9030.00	7930.55				MinPt-O-ADP	
1145.24	175.03	1027.89	970.20	9.91		OSF1.50	9080.00	7929.81				MINPT-O-EOU	
1143.01	167.84	1030.45	975.16	10.32		OSF1.50	9300.00	7926.54				MinPt-CtCt	
1145.18	154.04	1041.82	991.14	11.28		OSF1.50	9710.00	7920.45				MinPt-CtCt	
1156.56	131.30	1068.36	1025.25	13.39		OSF1.50	10400.00	7910.20				MinPt-O-ADP	
1155.91	130.51	1068.24	1025.40	13.47		OSF1.50	10440.00	7909.60				MINPT-O-EOU	
1155.37	128.61	1068.97	1026.76	13.66		OSF1.50	10530.00	7908.27				MinPt-CtCt	
1159.51	118.57	1079.81	1040.94	14.89		OSF1.50	10960.00	7901.88				MinPt-O-ADP	
1159.08	118.05	1079.72	1041.03	14.95		OSF1.50	11000.00	7901.29				MINPT-O-EOU	
1151.53	112.60	1075.80	1038.92	15.59		OSF1.50	11280.00	7897.13				MinPt-O-ADP	
1141.92	110.38	1067.67	1031.53	15.77		OSF1.50	11450.00	7894.60				MinPt-O-SF	
1122.59	107.83	1049.97	1014.76	15.91		OSF1.50	11690.00	7891.04				MinPt-O-SF	
1047.88	114.47	970.91	933.42	13.95		OSF1.50	12350.00	7881.23				MinPt-CtCt	
1048.07	115.25	970.58	932.82	13.85		OSF1.50	12380.00	7880.79				MINPT-O-EOU	
1048.50	115.76	970.66	932.73	13.80		OSF1.50	12400.00	7880.49				MinPt-O-ADP	
1068.55	120.53	987.53	948.01	13.49		OSF1.50	12620.00	7877.22				MinPt-O-SF	
5297.15	79.19	5243.69	5217.96	102.87		OSF1.50	17886.12	7799.00				TD	

Chevron Hayhurst 18 Fed 1H
(Offset) MWD 0ft-7500ft (Def
Survey)

Pass

5260.40	32.81	5259.11	5227.59	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
5259.97	32.81	5258.62	5227.16	81894.61	MAS = 10.00 (m)	26.00	26.00	MinPt-O-SF
5259.44	32.81	5257.99	5226.63	31980.82	MAS = 10.00 (m)	100.00	100.00	MinPts
5259.68	32.81	5257.77	5226.87	8489.73	MAS = 10.00 (m)	200.00	200.00	MINPT-O-EOU
5237.76	32.81	5227.92	5204.95	612.49	MAS = 10.00 (m)	1880.00	1880.00	MinPts
5238.12	32.81	5227.54	5205.31	563.92	MAS = 10.00 (m)	2100.00	2100.00	MINPT-O-EOU
5238.65	32.81	5227.91	5205.84	554.13	MAS = 10.00 (m)	2200.00	2199.98	MinPt-O-SF
5327.40	34.10	5304.23	5293.29	243.44	OSF1.50	6100.00	6063.44	MinPt-O-SF
5340.20	36.02	5315.76	5304.18	230.58	OSF1.50	7600.00	7561.97	MinPt-O-SF
1071.60	115.97	993.86	955.63	14.00	OSF1.50	13030.00	7871.13	MinPts
1071.66	116.03	993.88	955.63	13.99	OSF1.50	13040.00	7870.98	MinPt-O-ADP
1072.06	116.13	994.21	955.93	13.99	OSF1.50	13060.00	7870.69	MinPt-O-SF
4974.52	47.25	4942.59	4927.27	162.30	OSF1.50	17886.12	7799.00	TD

Chevron Hayhurst 18 Fed 1H
(Offset) ST01 MWD 0ft-11800ft
(Def Survey)

Pass

5260.40	32.81	5259.11	5227.59	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
5259.97	32.81	5258.62	5227.16	81894.61	MAS = 10.00 (m)	26.00	26.00	MinPt-O-SF
5259.44	32.81	5257.99	5226.63	31980.82	MAS = 10.00 (m)	100.00	100.00	MinPts
5259.68	32.81	5257.77	5226.87	8489.73	MAS = 10.00 (m)	200.00	200.00	MINPT-O-EOU
5237.76	32.81	5227.92	5204.95	612.49	MAS = 10.00 (m)	1880.00	1880.00	MinPts
5238.12	32.81	5227.54	5205.31	563.92	MAS = 10.00 (m)	2100.00	2100.00	MINPT-O-EOU
5238.65	32.81	5227.91	5205.84	554.13	MAS = 10.00 (m)	2200.00	2199.98	MinPt-O-SF
5327.40	34.10	5304.23	5293.29	243.44	OSF1.50	6100.00	6063.44	MinPt-O-SF
5365.38	35.56	5341.25	5329.82	234.77	OSF1.50	7501.93	7464.59	MinPt-O-SF
1137.20	126.45	1052.47	1010.75	13.61	OSF1.50	13500.00	7864.15	MinPt-CtCt
1137.47	127.35	1052.14	1010.12	13.52	OSF1.50	13540.00	7863.56	MINPT-O-EOU
1137.85	127.79	1052.22	1010.05	13.48	OSF1.50	13560.00	7863.26	MinPt-O-ADP
1142.32	135.03	1051.87	1007.29	12.80	OSF1.50	13770.00	7860.14	MINPT-O-EOU
1147.46	143.59	1051.30	1003.87	12.08	OSF1.50	14010.00	7856.58	MINPT-O-EOU
1151.89	149.63	1051.70	1002.25	11.63	OSF1.50	14170.00	7854.20	MINPT-O-EOU
1155.64	154.34	1052.32	1001.30	11.31	OSF1.50	14300.00	7852.27	MinPt-O-ADP

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
1174.53	174.21	1057.96	1000.32	10.18	OSF1.50	14760.00	7845.44					MINPT-O-EOU	
1144.18	254.53	974.07	889.65	6.77	OSF1.50	16450.00	7820.33					MinPt-CtCt	
1151.71	271.95	969.98	879.76	6.38	OSF1.50	16830.00	7814.69					MINPT-O-EOU	
1166.37	292.92	970.66	873.45	5.99	OSF1.50	17240.00	7808.60					MINPT-O-EOU	
1174.39	302.24	972.46	872.15	5.85	OSF1.50	17440.00	7805.63					MinPt-O-ADP	
1196.82	319.48	983.41	877.34	5.64	OSF1.50	17810.00	7800.13					MinPt-O-SF	
1204.89	318.22	992.31	886.67	5.70	OSF1.50	17886.12	7799.00					TD	

Gadwall 18 Federal 5H MWD
0ft to 12016ft (Def Survey)

Pass

5304.07	32.81	5302.09	5271.26	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
5303.61	32.81	5301.56	5270.80	77615.20	MAS = 10.00 (m)	26.00	26.00					MinPt-O-SF	
5303.01	32.81	5300.82	5270.20	25381.72	MAS = 10.00 (m)	110.00	110.00					MinPts	
5218.56	32.81	5196.72	5185.75	263.29	MAS = 10.00 (m)	5670.00	5637.57					MinPts	
5210.96	34.07	5187.57	5176.89	243.94	OSF1.50	6100.00	6063.44					MinPt-O-SF	
5208.83	33.31	5185.94	5175.51	249.71	OSF1.50	6250.00	6212.79					MinPt-O-ADP	
5208.79	33.26	5185.93	5175.52	250.11	OSF1.50	6260.00	6222.77					MINPT-O-EOU	
5208.74	33.11	5185.99	5175.63	251.32	OSF1.50	6290.00	6252.72					MinPt-CtCt	
5262.04	36.10	5237.31	5225.93	231.21	OSF1.50	7501.93	7464.59					MinPt-O-SF	
5264.03	36.10	5239.31	5227.93	231.35	OSF1.50	7600.00	7561.97					MinPt-O-SF	
1204.29	126.25	1119.46	1078.04	14.51	OSF1.50	12970.00	7872.02					MinPt-CtCt	
1204.59	127.15	1119.17	1077.44	14.41	OSF1.50	13000.00	7871.58					MINPT-O-EOU	
1204.86	127.44	1119.24	1077.42	14.38	OSF1.50	13010.00	7871.43					MinPt-O-ADP	
1218.76	130.74	1130.94	1088.02	14.18	OSF1.50	13160.00	7869.20					MinPt-O-SF	
1418.08	159.37	1311.18	1258.71	13.50	OSF1.50	14050.00	7855.98					MinPt-CtCt	
1420.57	167.10	1308.51	1253.47	12.89	OSF1.50	14260.00	7852.86					MINPT-O-EOU	
1424.43	174.09	1307.71	1250.34	12.40	OSF1.50	14440.00	7850.19					MINPT-O-EOU	
1430.29	183.70	1307.17	1246.59	11.79	OSF1.50	14680.00	7846.62					MINPT-O-EOU	
1435.65	202.44	1300.02	1233.20	10.73	OSF1.50	15120.00	7840.09					MinPt-CtCt	
1400.28	252.35	1231.39	1147.93	8.38	OSF1.50	16200.00	7824.05					MinPt-CtCt	
1400.90	271.40	1219.31	1129.50	7.79	OSF1.50	16590.00	7818.25					MinPt-CtCt	
1399.74	288.44	1206.78	1111.29	7.32	OSF1.50	16930.00	7813.20					MinPt-CtCt	
1383.05	360.44	1142.10	1022.61	5.78	OSF1.50	17670.00	7802.21					MinPt-CtCt	
1383.33	361.38	1141.75	1021.95	5.77	OSF1.50	17700.00	7801.76					MINPT-O-EOU	
1383.57	361.66	1141.81	1021.91	5.76	OSF1.50	17710.00	7801.62					MinPt-O-ADP	
1385.84	362.77	1143.34	1023.08	5.75	OSF1.50	17760.00	7800.87					MinPt-O-SF	
1399.51	363.53	1156.50	1035.98	5.80	OSF1.50	17886.12	7799.00					TD	

Oxy Peaches 19 Federal #2
(Offset) MWD 0ft-12641ft (Def
Survey)

Pass

10147.20	32.81	10145.91	10114.39	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
10146.81	32.81	10145.46	10114.00	161512.15	MAS = 10.00 (m)	26.00	26.00					MinPt-O-SF	
10144.40	32.81	10139.90	10111.59	3154.57	MAS = 10.00 (m)	770.00	770.00					MinPts	
10144.62	32.81	10139.70	10111.81	2798.39	MAS = 10.00 (m)	870.00	870.00					MINPT-O-EOU	
10143.82	32.81	10136.70	10111.01	1740.58	MAS = 10.00 (m)	1370.00	1370.00					MinPts	
10144.32	32.81	10136.34	10111.51	1516.26	MAS = 10.00 (m)	1560.00	1560.00					MINPT-O-EOU	
10144.22	32.81	10134.34	10111.41	1180.57	MAS = 10.00 (m)	1980.00	1980.00					MinPts	
10144.39	32.81	10133.87	10111.58	1098.16	MAS = 10.00 (m)	2160.00	2160.00					MINPT-O-EOU	
10297.13	33.37	10274.45	10263.76	481.35	OSF1.50	6100.00	6063.44					MinPt-O-SF	
10308.17	33.87	10285.16	10274.30	474.53	OSF1.50	7120.00	7082.65					MinPt-CtCt	
10308.11	34.29	10284.83	10273.83	468.45	OSF1.50	7230.00	7192.65					MinPt-CtCt	
10308.16	34.44	10284.77	10273.72	466.34	OSF1.50	7270.00	7232.65					MINPT-O-EOU	
10308.23	34.51	10284.79	10273.71	465.30	OSF1.50	7290.00	7252.65					MinPt-O-ADP	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
	10310.68	35.32	10286.70	10275.35	454.33	OSF1.50	7501.93	7464.59				MinPt-O-SF	
	10302.98	35.31	10279.01	10267.67	454.12	OSF1.50	7600.00	7561.97				MinPt-O-SF	
	1384.09	227.59	1231.77	1156.50	9.18	OSF1.50	17886.12	7799.00				MinPts	

Cimarex Da Vinci 7 Federal
Com #2H Gyro+MWD 0ft to
11690ft MD (Def Survey)

Pass

4650.09	32.81	4648.11	4617.28	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
4649.68	32.81	4647.64	4616.87	80138.93	MAS = 10.00 (m)	26.00	26.00	MinPt-O-SF
4649.30	32.81	4647.18	4616.49	32682.05	MAS = 10.00 (m)	90.00	90.00	MinPts
4650.21	32.81	4646.49	4617.40	2672.82	MAS = 10.00 (m)	390.00	390.00	MINPT-O-EOU
4654.01	32.81	4647.35	4621.20	994.13	MAS = 10.00 (m)	1080.00	1080.00	MinPts
4648.21	32.81	4636.72	4615.40	488.70	MAS = 10.00 (m)	2180.00	2179.99	MinPts
4648.22	32.81	4636.68	4615.41	486.22	MAS = 10.00 (m)	2200.00	2199.98	MINPT-O-EOU
1572.72	230.17	1418.62	1342.55	10.33	OSF1.50	7400.00	7362.65	MinPts
1572.75	230.19	1418.63	1342.56	10.32	OSF1.50	7410.00	7372.65	MinPt-O-SF
1650.39	191.35	1522.16	1459.04	13.06	OSF1.50	8400.00	7939.91	MINPT-O-EOU
1602.91	139.06	1509.54	1463.85	17.52	OSF1.50	9540.00	7922.97	MinPt-O-ADP
1566.02	118.19	1486.57	1447.83	20.19	OSF1.50	10150.00	7913.91	MinPt-O-ADP
1511.44	92.88	1448.86	1418.56	24.91	OSF1.50	11860.00	7888.51	MinPt-CtCt
1511.49	93.05	1448.79	1418.44	24.86	OSF1.50	11880.00	7888.21	MINPT-O-EOU
1511.57	93.13	1448.82	1418.44	24.84	OSF1.50	11890.00	7888.07	MinPt-O-ADP
1532.35	95.59	1467.97	1436.77	24.52	OSF1.50	12220.00	7883.16	MinPt-O-SF
5785.83	61.89	5743.91	5723.94	144.81	OSF1.50	17886.12	7799.00	TD

1. Geological Formations

TVD of target 7,799

Pilot Hole TD N/A

MD at TD 17,886

Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	0	N/A	
Salado	1334	N/A	
Castille	1859	N/A	
Bell Canyon	2090	Hydrocarbons	
Cherry Canyon	2944	Hydrocarbons	
Brushy Canyon	4006	Hydrocarbons	
Bone Spring	5624	Hydrocarbons	
1st Bone Spring	6535	Hydrocarbons	
2nd Bone Spring	7109	Hydrocarbons	
3rd Bone Spring	7475	Hydrocarbons	
Harkey Sand	7813	Hydrocarbons	
Harkey Sand Target	7972	Hydrocarbons	

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	450	450	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	3.59	8.40	14.91
12 1/4	0	2068	2068	9-5/8"	36.00	J-55	LT&C	1.84	3.21	6.08
8 3/4	0	7502	7502	5-1/2"	20.00	L-80	LT&C	2.52	2.62	2.67
8 3/4	7502	17886	7800	5-1/2"	20.00	L-80	BT&C	2.42	2.46	78.19
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

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

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

3. Cementing Program

Casing	# Sk	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	91	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	392	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	121	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	1030	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	2448	14.80	1.34	6.32	9.5	Tail: Class C + LCM

Casing String	TOC	% Excess
Surface	0	33
Intermediate	0	50
Production	1868	25

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

4. Pressure Control Equipment

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

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

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

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

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 450'	FW Spud Mud	8.30 - 8.80	30-32	N/C
450' to 2068'	Brine Water	9.70 - 10.20	30-32	N/C
2068' to 17886'	OBM	8.50 - 9.00	50-70	N/C
				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
---	-----------------------------

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
-------------------------	----------

7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	psi
Abnormal Temperature	No

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

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

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

A multi-bowl wellhead system will be utilized.

After running the 13-3/8" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi test. Annular will be tested to 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2.

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

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

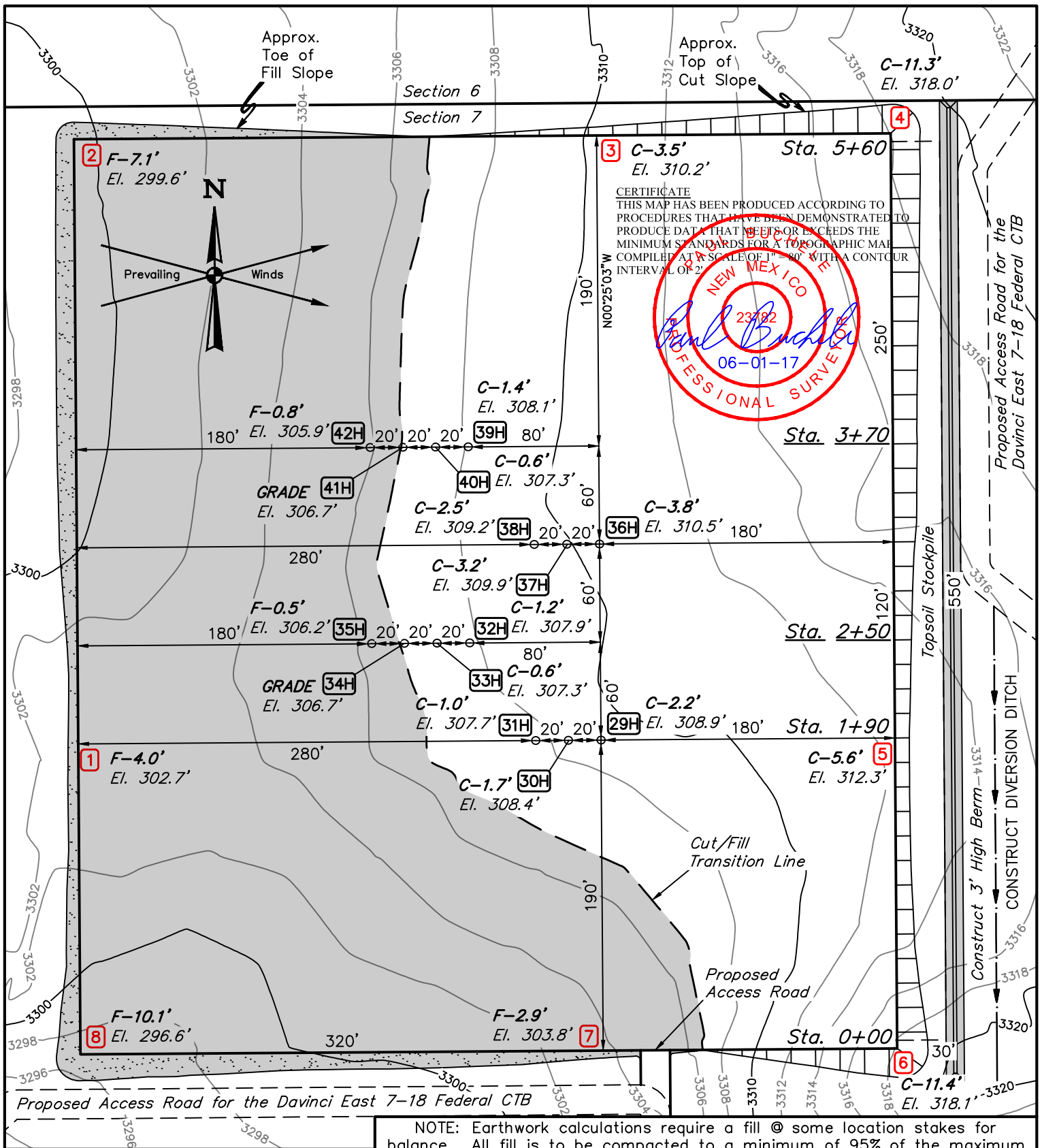
All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

A solid steel body pack-off will be utilized after running and cementing the production casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

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

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



FINISHED GRADE ELEVATION = 3306.7'

NOTES:

- Contours shown at 2' intervals.
- Cut/Fill slopes 1 1/2:1 (Typ. except where noted)

CIMAREX ENERGY CO.

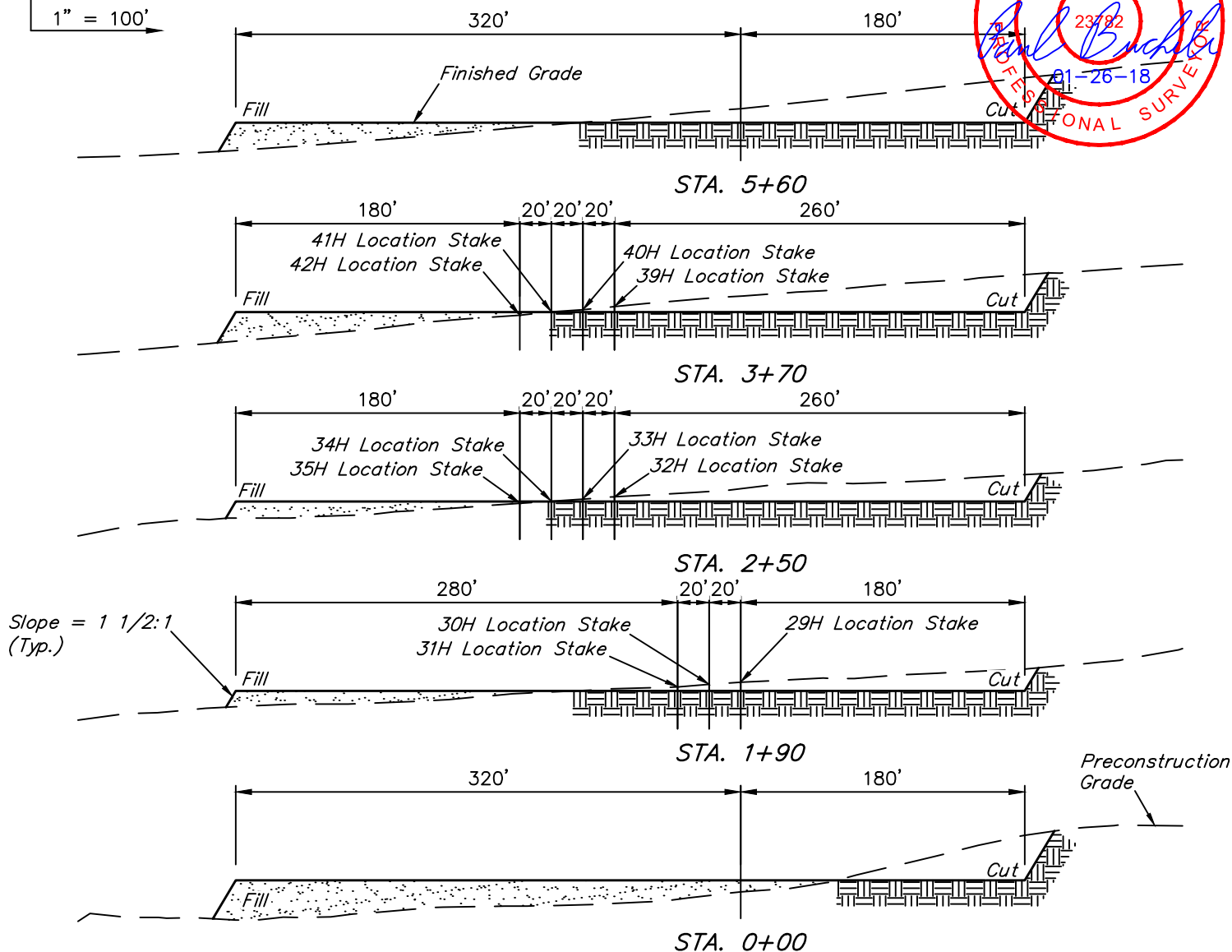
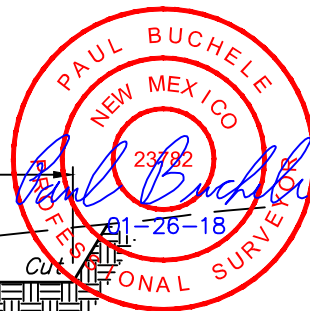
DAVINCI 7-18 FEDERAL W2E2
N 1/2 NE 1/4, SECTION 7, T25S, R27E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

SURVEYED BY	M.P., B.D.	05-10-17	SCALE
DRAWN BY	S.F.	05-29-17	1" = 80'
LOCATION LAYOUT			EXHIBIT D



UELS, LLC
 Corporate Office * 85 South 200 East
 Vernal, UT 84078 * (435) 789-1017

X-Section
Scale
1" = 100'



APPROXIMATE EARTHWORK QUANTITIES	
(4") TOPSOIL STRIPPING	3,730 Cu. Yds.
REMAINING LOCATION	22,290 Cu. Yds.
TOTAL CUT	26,020 Cu. Yds.
FILL	22,290 Cu. Yds.
EXCESS MATERIAL	3,730 Cu. Yds.
TOPSOIL	3,730 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	0 Cu. Yds.

APPROXIMATE SURFACE DISTURBANCE AREAS		
	DISTANCE	ACRES
WELL SITE DISTURBANCE	NA	±7.139
30' WIDE ACCESS ROAD R-O-W DISTURBANCE	±30.08'	±0.021
60' WIDE FLOW LINE R-O-W DISTURBANCE	±504.99'	±0.696
30' WIDE FLOW LINE LATERAL R-O-W DISTURBANCE	±664.96'	±0.458
30' WIDE POWER LINE R-O-W DISTURBANCE	±49.23'	±0.034
TOTAL SURFACE USE AREA		±8.348

REV: 2 01-25-18 S.F. (RE-ROUTE FLOW LINE & ADD LATERAL)

NOTES:

- Fill quantity includes 5% for compaction.
- Cut/Fill slopes 1 1/2:1 (Typ. except where noted)

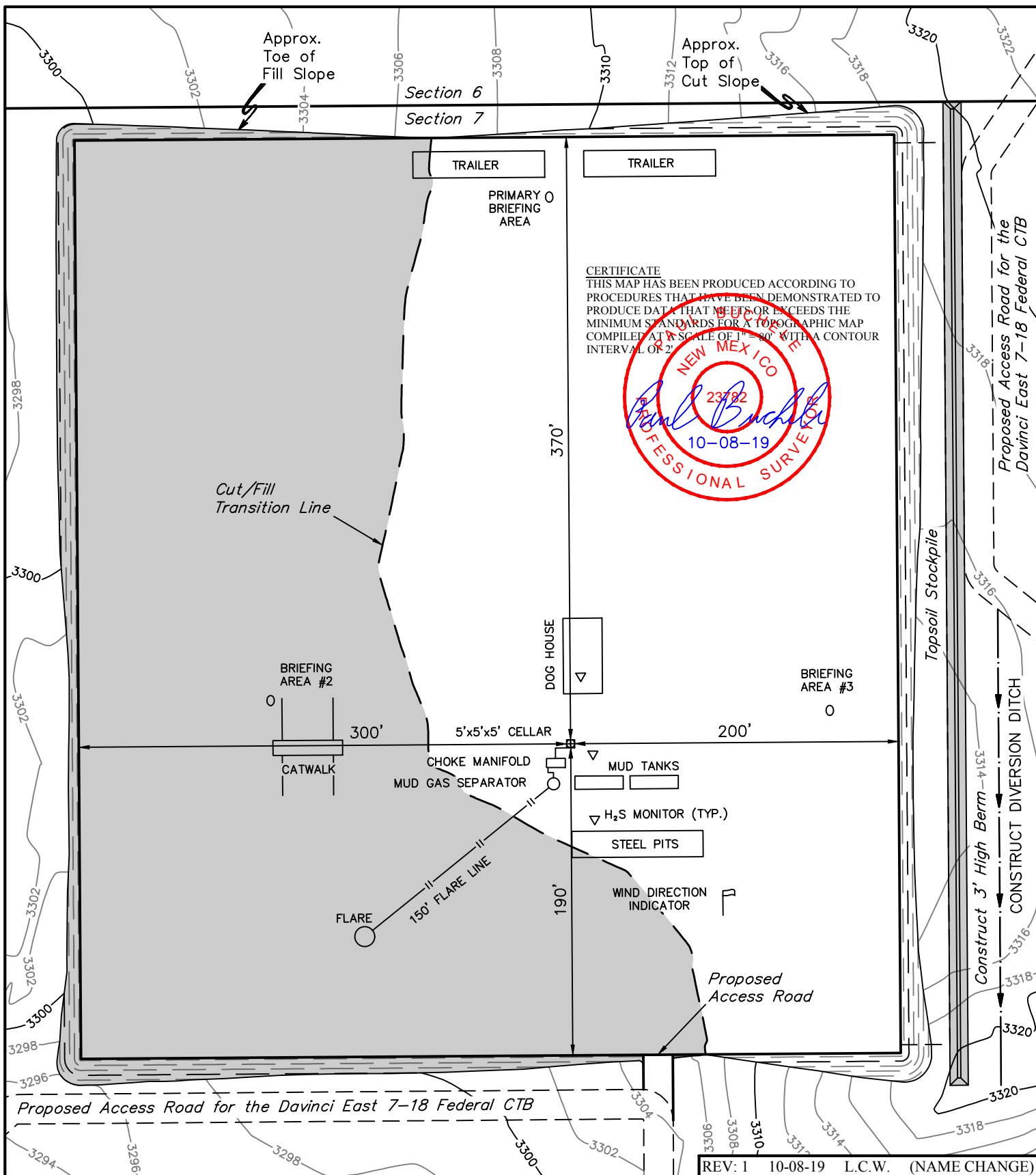
CIMAREX ENERGY CO.

DAVINCI 7-18 FEDERAL W2E2
N 1/2 NE 1/4, SECTION 7, T25S, R27E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

SURVEYED BY	M.P., B.D.	05-10-17	SCALE
DRAWN BY	S.F.	05-29-17	AS SHOWN
TYPICAL CROSS SECTIONS		EXHIBIT D	



NOTES:

- Contours shown at 2' intervals.

CIMAREX ENERGY CO.

DAVINCI 7-18 FEDERAL COM 30H
390' FNL 1430' FEL
NW 1/4 NE 1/4, SECTION 7, T25S, R27E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

SURVEYED BY	M.P., B.D.	05-10-17	SCALE
DRAWN BY	S.F.	05-29-17	1" = 80'
TYPICAL RIG LAYOUT			EXHIBIT D

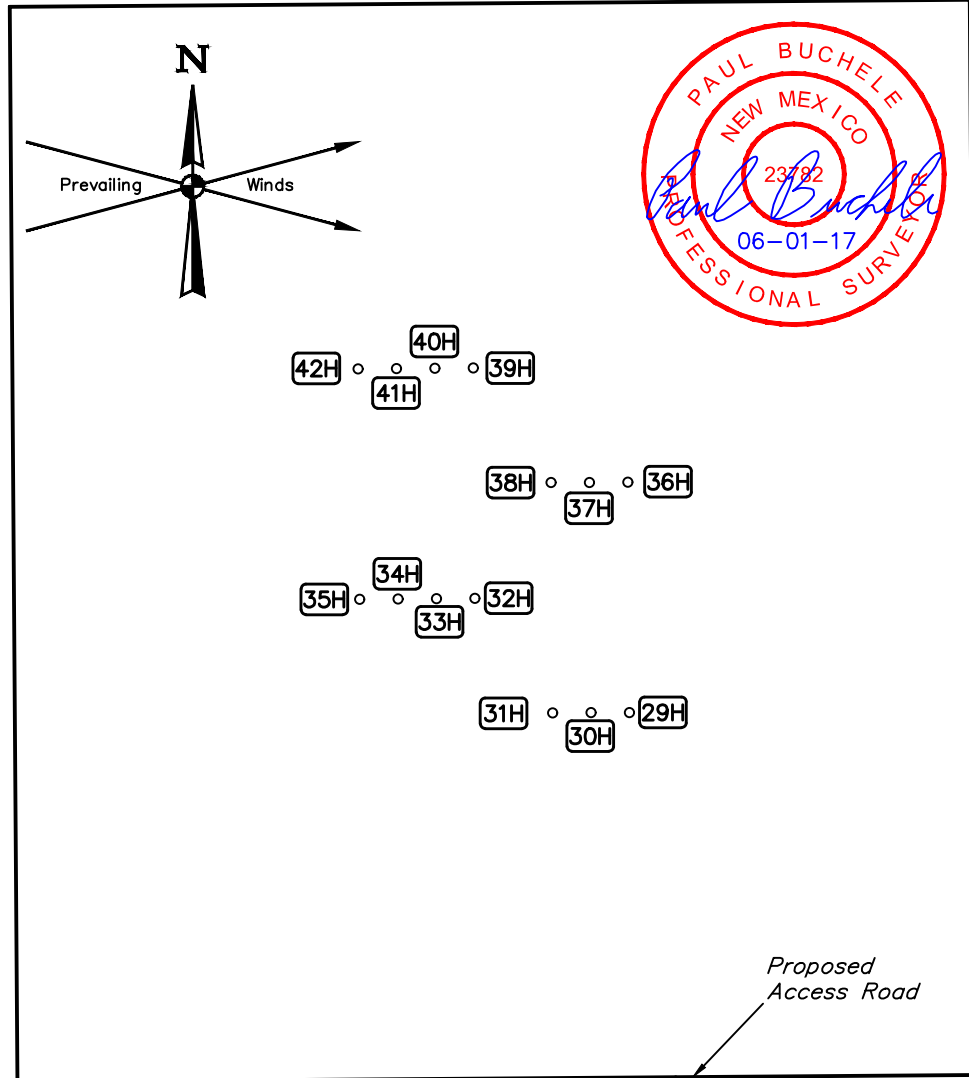


UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

760' X 700' Archaeological Survey Boundary

Section 6

Section 7



Topsail Stockpile

Proposed Access Road for the
Davinci East 7-18 Federal CTB

Proposed
Access Road

Proposed Access Road for the
Davinci East 7-18 Federal CTB

NOTES:

CIMAREX ENERGY CO.

DAVINCI 7-18 FEDERAL W2E2
N 1/2 NE 1/4, SECTION 7, T25S, R27E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



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 Corporate Office * 85 South 200 East
 Vernal, UT 84078 * (435) 789-1017

SURVEYED BY	M.P., B.D.	05-10-17	SCALE
DRAWN BY	S.F.	05-29-17	1" = 100'
ARCHAEOLOGICAL SURVEY BOUNDARY			EXHIBIT D