

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018SUNDRY 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.

MAR 09 2020

LAND DEPARTMENT

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM0404441
2. Name of Operator DEVON ENERGY PRODUCTION COMPANY Contact: JENNIFER HARMS Email: jennifer.harms@devon.com		6. If Indian, Allottee or Tribe Name
3a. Address 333 WEST SHERIDAN AVENUE OKLAHOMA CITY, OK 73102	3b. Phone No. (include area code) Ph: 405-552-6560	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 11 T23S R31E SESE 500FSL 910FEL 32.313084 N Lat, 103.742973 W Lon		8. Well Name and No. BELLOQ 11-2 FED STATE COM 734H
		9. API Well No. 30-015-46756-00-X1
		10. Field and Pool or Exploratory Area PURPLE SAGE-WOLFCAMP (GAS)
		11. County or Parish, State EDDY COUNTY, NM

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

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

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple 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 recomple 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.

Devon Energy Production Co., (Devon) respectfully request to have a 4-string casing design for the Wolfcamp wellbore. This design will reflect the drilling design planned for the Belloq 11-2 State Fed Com 714H. The pool code is incorrect on the 3160 and should read WC-015 G-08 S2331102C; Wolfcamp. Please see attached documents.

Carlsbad Field Office Operator Copy

14. I hereby certify that the foregoing is true and correct. Electronic Submission #504694 verified by the BLM Well Information System For DEVON ENERGY PRODUCTION COMPANY LP, sent to the Carlsbad Committed to AFMSS for processing by PRISCILLA PEREZ on 02/27/2020 (20PP1375SE)	
Name (Printed/Typed) JENNIFER HARMS	Title REGULATORY COMPLIANCE ANALYST
Signature (Electronic Submission)	Date 02/27/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By LONG VO	Title PETROLEUM ENGINEER	Date 03/03/2020
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 **

Accepted for Record 03/25/2020 - Kurt Simmons NMOCD

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company LP
LEASE NO.:	NMNM0404441
WELL NAME & NO.:	Belloq 11-2 Fed State Com #734H
SURFACE HOLE FOOTAGE:	500'/S & 910'/E
BOTTOM HOLE FOOTAGE:	20'/N & 330'/E
LOCATION:	Section 11, T.23 S., R.31 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

OPERATOR IS ONLY APPROVED FOR THE FOLLOWING DESIGN, OTHER DESIGNS SUBMITTED WILL BE VOID.

A. CASING

Alternate Casing Design:

1. The 13-3/8 inch surface casing shall be set at approximately **820 feet** (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - 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 **24 hours in the Potash Area** 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 10-3/4 inch intermediate casing shall be set at approximately 4470 feet is:

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash. Cement excess is less than 25%, more cement might be required.**

❖ In R111 Potash 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.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

3. The minimum required fill of cement behind the 8-5/8 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. Cement excess is less than 25%, more cement might be required.**

Operator has proposed to pump down 10-3/4" X 8-5/8" annulus. Operator must run a CBL from TD of the 8-5/8" casing to surface. Submit results to BLM.

4. The minimum required fill of cement behind the 5-1/2 inch production casing is:
- Cement should tie-back at least **500 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. 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 surface casing shoe shall be **10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 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 Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, 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.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

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

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

VAM SG

Connection Data Sheet

O.D (in)	WEIGHT (lb/ft)	WALL (in)	GRADE	DRIFT	CONNECTION
5.500	20.00	0.361	VST P110EC	4.653	VAM® SG

PIPE PROPERTIES	
Material Grade	VST P110EC
Min. Yield Strength	125 ksi
Min. Tensile Strength	135 ksi
Nominal OD	5.500 in
Nominal ID	4.778 in
Nominal Area	5.828 sq. in
Yield Strength	729 kips
Ultimate Strength	787 kips
Min Internal Yield	14,360 psi
External Pressure	12,090 psi

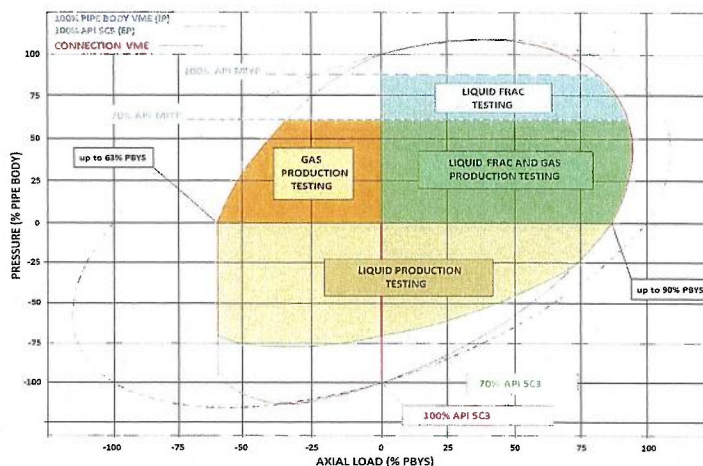
CONNECTION PROPERTIES	
Connection OD	5.697 in
Connection ID	4.711 in
Make up Loss	6.335 in
Connection Critical Area	5.071 sq. in
%PB Section Area	87.0%
Yield Strength	634 kips
Parting Load	685 kips
Min Internal Yield	14,360 psi
External Pressure	8,460 psi
Structural Collapse	12,090 psi
Working Compression	444 kips
Max. Bending w/ Sealability	40 °/100 ft

DOCUMENTATION	
Ref. Drawing	SI-PD 100954 Rev.A
Date	21-Jul-17
Time	3:19 PM
Email	tech.support@vam-usa.com

TORQUE VALUES	
Min Make Up Torque	8,100 ft-lb
Opt Make Up Torque	9,800 ft-lb
Max Make Up Torque	11,500 ft-lb
Max Torque w/ Sealability	12,500 ft-lb

The single solution for Shale Play needs

VAM® SG brings VAM® premium sealing performance to a semi-flush connection with extremely high Tension performance and increased Torque capacity, validated to the specific Shale drilling requirements, while remaining highly competitive in North American Shale play economics.



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1. Geologic Formations

TVD of target	12060	Pilot hole depth	N/A
MD at TD:	22340	Deepest expected fresh water	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	700		
Salt	1075		
Base of Salt	4200		
Lamar	4200		
Delaware	4450		
Cherry Canyon	5350		
Brushy Canyon	6600		
1st Bone Spring Lime	8275		
Bone Spring 1st	9350		
Bone Spring 2nd	9900		
Bone Spring 3rd	11150		
Wolfcamp	11600		
Strawn	13300		

*H₂S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program (Primary Design)

Hole Size	Casing Interval		Csg. Size	Wt (PPF)	Grade	Conn	Min SF Collapse	Min SF Burst	Min SF Tension
	From	To							
17 1/2	0	725 TVD	13 3/8	48.0	H40	STC	1.125	1.25	1.6
12 1/4	0	4225 TVD	9 5/8	40.0	J-55	BTC	1.125	1.25	1.6
8 3/4	0	11175 TVD	7 5/8	29.7	P110	Flushmax III	1.125	1.25	1.6
6 3/4	0	TD	5 1/2	20.0	P110	BTC	1.125	1.25	1.6
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

- All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.h Must have table for contingency casing.
- Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.
- A variance is requested for collapse rating on intermediate casing. Operator will keep pipe full while running casing.
- Int casing shoe will be selected based on drilling data/gamma, setting depth with be revised accordingly if needed.
- A variance is requested to wave the centralizer requirement for the Intermediate casing and production casing.
- A variance is requested to set intermediate casing in the curve if hole conditions dictate that a higher shoe strength is required.

Casing Program (Alternative Design) *

Hole Size	Casing Interval		Csg. Size	Wt (PPF)	Grade	Conn	Min SF Collapse	Min SF Burst	Min SF Tension
	From	To							
17 1/2	0	725 TVD 820	13 3/8	48.0	H40	STC	1.125	1.25	1.6
12 1/4	0	4225 TVD 4470	10 3/4	45.5	HCL80	BTC SCC	1.125	1.25	1.6
9 7/8	0	11175 TVD	8 5/8	32	P110	TLW	1.125	1.25	1.6
7 7/8	0	TD	5 1/2	17.0	P110	BTC	1.125	1.25	1.6
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

Fluid Filled

- All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.h Must have table for contingency casing.
- Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.
- A variance is requested for collapse rating on intermediate casing. Operator will keep pipe full while running casing.
- Int casing shoe will be selected based on drilling data/gamma, setting depth with be revised accordingly if needed.
- A variance is requested to wave the centralizer requirement for the Intermediate casing and production casing.
- A variance is requested to set intermediate casing in the curve if hole conditions dictate that a higher shoe strength is required.

	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 3 rd string cement tied back 500' into previous casing?	N
Is well located in R-111-P and SOPA?	Y
If yes, are the first three strings cemented to surface?	Y
Is 2 nd string set 100' to 600' below the base of salt?	Y
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program (Primary Design)

Casing	# Sks	TOC	Wt. (lb/gal)	Yld (ft ³ /sack)	Slurry Description
Surface	563	Surf	13.2	1.44	Lead: Class C Cement + additives
Int	457	Surf	9	3.27	Lead: Class C Cement + additives
	154	500' above shoe	13.2	1.44	Tail: Class H / C + additives
Int 1	242	Surf	9	3.27	Lead: Class C Cement + additives
	370	4000' above shoe	13.2	1.44	Tail: Class H / C + additives
Int 1 Two Stage w/ DV @ TVD of Delaware	446	Surf	9	3.27	1st stage Lead: Class C Cement + additives
	136	500' above shoe	13.2	1.44	1st stage Tail: Class H / C + additives
	470	Surf	9	3.27	2nd stage Lead: Class C Cement + additives
	136	500' above DV	13.2	1.44	2nd stage Tail: Class H / C + additives
Int 1 Intermediate Squeeze	As Needed	Surf	9	1.44	Squeeze Lead: Class C Cement + additives
	457	Surf	9	3.27	Lead: Class C Cement + additives
	154	4000' above shoe	13.2	1.44	Tail: Class H / C + additives
Production	359	0	9.0	3.3	Lead: Class H / C + additives
	690	11524	13.2	1.4	Tail: Class H / C + additives

If a DV tool is ran the depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Slurry weights will be adjusted based on estimated fracture gradient of the formation. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

Casing String	% Excess
Surface	50%
Intermediate and Intermediate 1	30%
Intermediate 1 (Two Stage)	25%
Prod	10%

3. Cementing Program (Alternative Design) *

Casing	# Sks	TOC	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	563	Surf	13.2	1.44	Lead: Class C Cement + additives
Int	280	Surf	9	3.27	Lead: Class C Cement + additives
	101	500' above shoe	13.2	1.44	Tail: Class H / C + additives
Int 1	301	Surf	9	3.27	Lead: Class C Cement + additives
	465	4000' above shoe	13.2	1.44	Tail: Class H / C + additives
Int 1 Two Stage w DV @ ~4500	268	Surf	9	3.27	1st stage Lead: Class C Cement + additives
	82	500' above shoe	13.2	1.44	1st stage Tail: Class H / C + additives
	288	Surf	9	3.27	2nd stage Lead: Class C Cement + additives
	82	500' above DV	13.2	1.44	2nd stage Tail: Class H / C + additives
Int 1 Intermediate Squeeze	As Needed	Surf	13.2	1.44	Squeeze Lead: Class C Cement + additives
	280	Surf	9	3.27	Lead: Class C Cement + additives
	101	4000' above shoe	13.2	1.44	Tail: Class H / C + additives
Production	672	0	9.0	3.3	Lead: Class H / C + additives
	1432	11524	13.2	1.4	Tail: Class H / C + additives

If a DV tool is ran the depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Slurry weights will be adjusted based on estimated fracture gradient of the formation. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

Casing String	% Excess
Surface	50%
Intermediate and Intermediate 1	30%
Intermediate 1 (Two Stage)	25%
Prod	10%

4. Pressure Control Equipment (Three String Design)

BOP installed and tested before drilling which hole?		Size?	Min. Required WP	Type	✓	Tested to:
Int 1	13-5/8"	5M	Annular		X	50% of rated working pressure
			Blind Ram		X	5M
			Pipe Ram			
			Double Ram		X	
			Other*			
Production	13-5/8"	10M	Annular (5M)		X	100% of rated working pressure
			Blind Ram		X	10M
			Pipe Ram			
			Double Ram		X	
			Other*			
			Annular (5M)			
			Blind Ram			
			Pipe Ram			
			Double Ram			
			Other*			
N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.					
Y	A variance is requested to run a 5 M annular on a 10M system					

5. Mud Program (Three String Design)

Section	Type	Weight (ppg)
Surface	FW Gel	8.5-9
Intermediate	Brine	10-10.5
Intermediate 1	WBM	8.5-9
Production	OBM	10-10.5

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? If yes, explain.
	Coring? If yes, explain.

Additional logs planned	Interval
Resistivity	Int. shoe to KOP
Density	Int. shoe to KOP
X CBL	Production casing
X Mud log	Intermediate shoe to TD
PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH pressure at deepest TVD	5644
Abnormal temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

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.

N	H ₂ S is present
Y	H ₂ S plan attached.

8. Other facets of operation

Is this a walking operation? Potentially

- 1 If operator elects, drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
- 2 The drilling rig will then batch drill the intermediate sections and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well.
- 3 The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Potentially

- 1 Spudder rig will move in and batch drill surface hole.
 - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.,
- 2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
- 3 The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pad.
- 6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
- 7 Drilling operations will be performed with drilling rig. At that time an approved BOP stack will be nipped up and tested on the wellhead before drilling operations commences on each well.
 - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

X Directional Plan
 Other, describe

Devon Energy

WELL DETAILS: Belloq 11-2 Fed State Com 734H

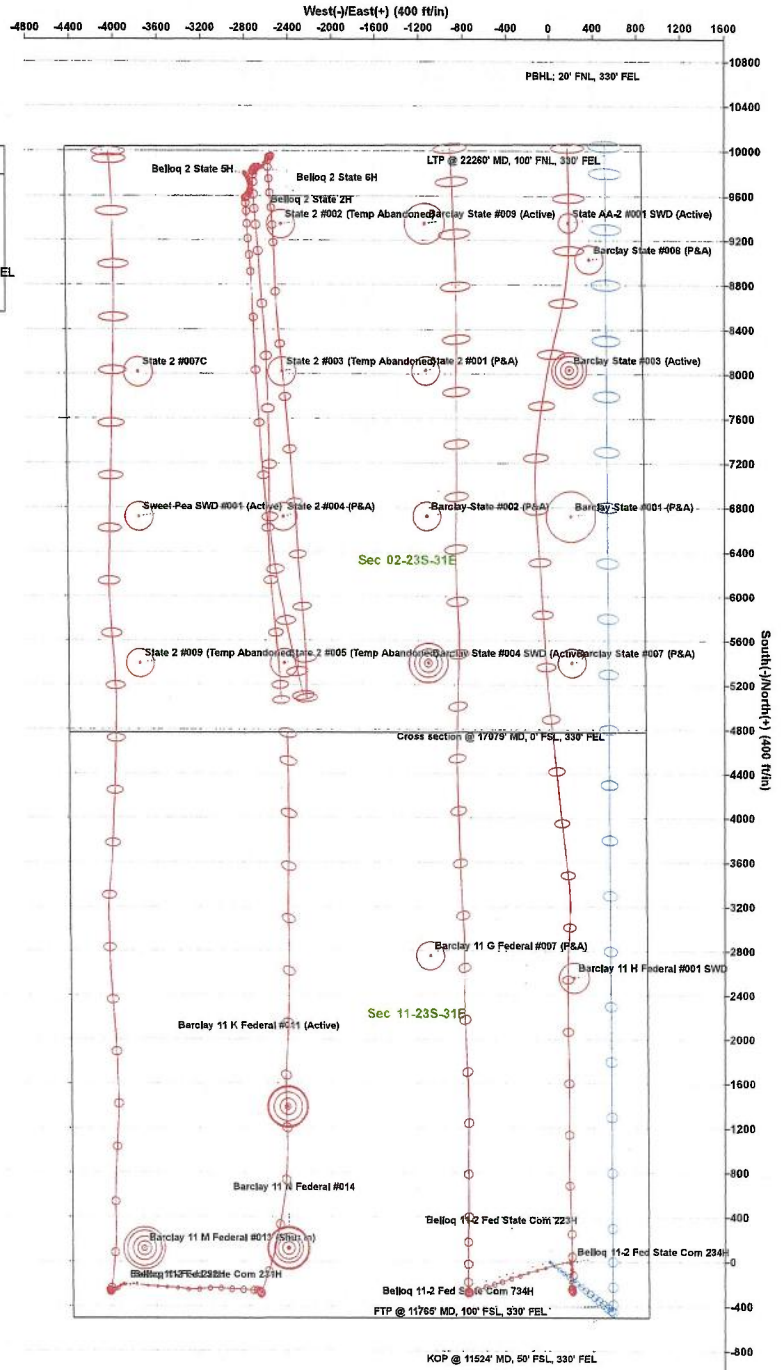
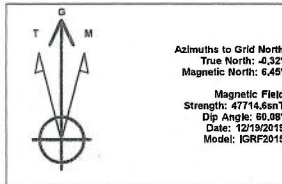
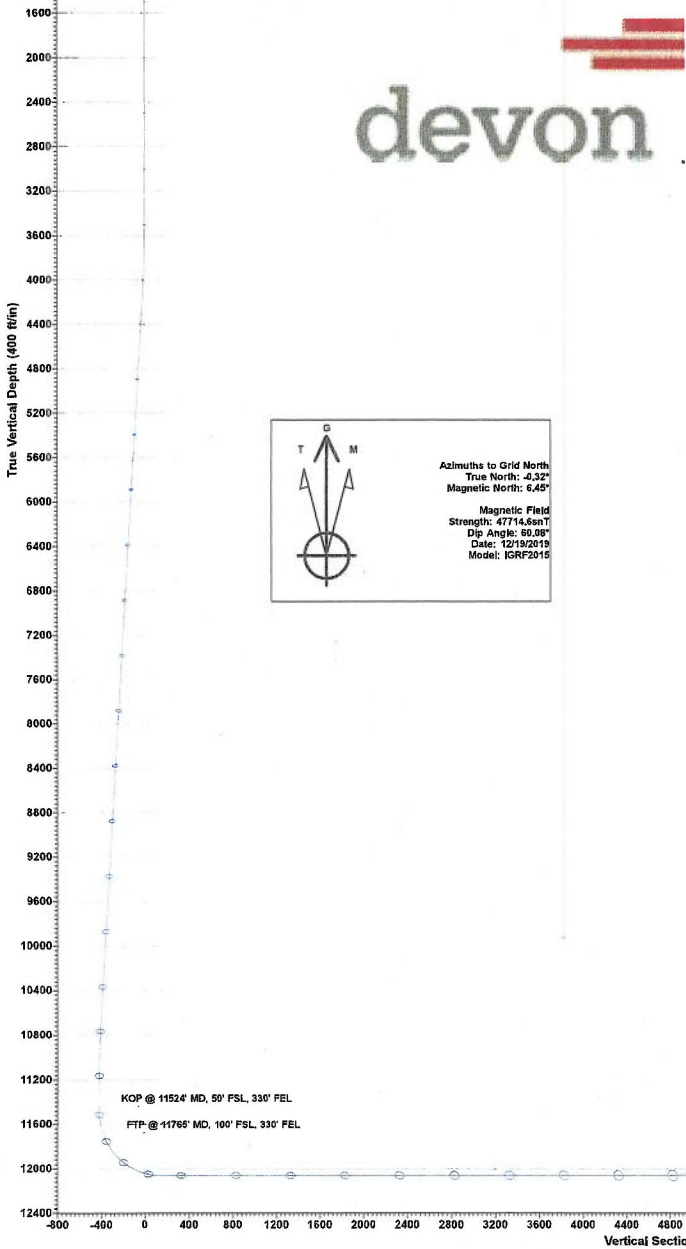
RKB @ 3514.90ft

3489.90

Northing 478134.17 Easting 723719.47 Latitude 32.313083 Longitude -103.742971

SECTION DETAILS Permit Plan 2

	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	VSec	Annotation
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	
	4086.38	5.86	127.81	4085.35	-18.38	23.69	1.00	-17.14	
	10782.82	5.86	127.81	10746.76	-437.75	564.21	0.00	-408.25	
5	11173.74	0.00	0.00	11137.00	-450.00	580.00	1.50	-419.67	KOP @ 11524' MD, 50' FSL, 330' FEL
6	11523.78	0.00	0.00	11487.04	-450.00	580.00	0.00	-419.67	
7	12423.79	90.00	359.65	12060.00	122.95	576.47	10.00	152.34	
8	22340.35	90.00	359.65	12060.00	10039.32	515.36	0.00	10052.54	PBHL: 20' FNL, 330' FEL



WCDSC Permian NM

Eddy County (NAD 83 NM Eastern)

Sec 11-T23S-R31E

Belloq 11-2 Fed State Com 734H

Wellbore #1

Plan: Permit Plan 2

Standard Planning Report - Geographic

19 December, 2019

Planning Report - Geographic

Database: EDM r5000.141_Prod US
 Company: WCDSC Permian NM
 Project: Eddy County (NAD 83 NM Eastern)
 Site: Sec 11-T23S-R31E
 Well: Belloq 11-2 Fed State Com 734H
 Wellbore: Wellbore #1
 Design: Permit Plan 2

Local Co-ordinate Reference: Well Belloq 11-2 Fed State Com 734H
 TVD Reference: RKB @ 3514.90ft
 MD Reference: RKB @ 3514.90ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Project	Eddy County (NAD 83 NM Eastern)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Sec 11-T23S-R31E				
Site Position:		Northing:	488,170.26 usft	Latitude:	32.340736
From:	Map	Easting:	719,281.88 usft	Longitude:	-103.757161
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.31 °

Well	Belloq 11-2 Fed State Com 734H					
Well Position	+N/-S	0.00 ft	Northing:	478,134.17 usft	Latitude:	32.313083
	+E/-W	0.00 ft	Easting:	723,719.47 usft	Longitude:	-103.742972
Position Uncertainty		0.50 ft	Wellhead Elevation:		Ground Level:	3,489.90 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/19/2019	6.77	60.08	47,714.63163231

Design	Permit Plan 2				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	2.94	

Plan Survey Tool Program	Date	12/19/2019			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	22,340.35 Permit Plan 2 (Wellbore #1)	MWD+HDGM OWSG MWD + HDGM		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,086.38	5.86	127.81	4,085.35	-18.38	23.69	1.00	1.00	0.00	127.81	
10,782.83	5.86	127.81	10,746.76	-437.75	564.21	0.00	0.00	0.00	0.00	
11,173.74	0.00	0.00	11,137.00	-450.00	580.00	1.50	-1.50	0.00	180.00	
11,523.78	0.00	0.00	11,487.04	-450.00	580.00	0.00	0.00	0.00	0.00	
12,423.79	90.00	359.65	12,060.00	122.95	576.47	10.00	10.00	0.00	359.65	PBHL - Belloq 11-2 Fe
22,340.35	90.00	359.65	12,060.00	10,039.32	515.36	0.00	0.00	0.00	0.00	PBHL - Belloq 11-2 Fe

Planning Report - Geographic

Database: EDM r5000.141_Prod US
Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Site: Sec 11-T23S-R31E
Well: Belloq 11-2 Fed State Com 734H
Wellbore: Wellbore #1
Design: Permit Plan 2

Local Co-ordinate Reference: Well Belloq 11-2 Fed State Com 734H
TVD Reference: RKB @ 3514.90ft
MD Reference: RKB @ 3514.90ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
100.00	0.00	0.00	100.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
200.00	0.00	0.00	200.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
300.00	0.00	0.00	300.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
400.00	0.00	0.00	400.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
500.00	0.00	0.00	500.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
600.00	0.00	0.00	600.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
700.00	0.00	0.00	700.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
800.00	0.00	0.00	800.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
900.00	0.00	0.00	900.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
1,000.00	0.00	0.00	1,000.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
1,100.00	0.00	0.00	1,100.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
1,200.00	0.00	0.00	1,200.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
1,300.00	0.00	0.00	1,300.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
1,400.00	0.00	0.00	1,400.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
1,500.00	0.00	0.00	1,500.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
1,600.00	0.00	0.00	1,600.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
1,700.00	0.00	0.00	1,700.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
1,800.00	0.00	0.00	1,800.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
1,900.00	0.00	0.00	1,900.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
2,000.00	0.00	0.00	2,000.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
2,100.00	0.00	0.00	2,100.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
2,200.00	0.00	0.00	2,200.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
2,300.00	0.00	0.00	2,300.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
2,400.00	0.00	0.00	2,400.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
2,500.00	0.00	0.00	2,500.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
2,600.00	0.00	0.00	2,600.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
2,700.00	0.00	0.00	2,700.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
2,800.00	0.00	0.00	2,800.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
2,900.00	0.00	0.00	2,900.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
3,000.00	0.00	0.00	3,000.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
3,100.00	0.00	0.00	3,100.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
3,200.00	0.00	0.00	3,200.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
3,300.00	0.00	0.00	3,300.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
3,400.00	0.00	0.00	3,400.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
3,500.00	0.00	0.00	3,500.00	0.00	0.00	478,134.17	723,719.47	32.313083	-103.742972
3,600.00	1.00	127.81	3,600.00	-0.53	0.69	478,133.64	723,720.16	32.313081	-103.742969
3,700.00	2.00	127.81	3,699.96	-2.14	2.76	478,132.03	723,722.22	32.313077	-103.742963
3,800.00	3.00	127.81	3,799.86	-4.81	6.20	478,129.36	723,725.67	32.313070	-103.742952
3,900.00	4.00	127.81	3,899.68	-8.56	11.03	478,125.62	723,730.49	32.313059	-103.742936
4,000.00	5.00	127.81	3,999.37	-13.37	17.23	478,120.81	723,736.69	32.313046	-103.742916
4,086.38	5.86	127.81	4,085.35	-18.38	23.69	478,115.79	723,743.15	32.313032	-103.742895
4,100.00	5.86	127.81	4,098.91	-19.23	24.79	478,114.94	723,744.25	32.313030	-103.742892
4,200.00	5.86	127.81	4,198.38	-25.49	32.86	478,108.68	723,752.32	32.313012	-103.742866
4,300.00	5.86	127.81	4,297.86	-31.76	40.93	478,102.42	723,760.40	32.312995	-103.742840
4,400.00	5.86	127.81	4,397.34	-38.02	49.00	478,096.15	723,768.47	32.312978	-103.742814
4,500.00	5.86	127.81	4,496.81	-44.28	57.07	478,089.89	723,776.54	32.312960	-103.742788
4,600.00	5.86	127.81	4,596.29	-50.54	65.14	478,083.63	723,784.61	32.312943	-103.742762
4,700.00	5.86	127.81	4,695.77	-56.81	73.22	478,077.36	723,792.68	32.312926	-103.742736
4,800.00	5.86	127.81	4,795.24	-63.07	81.29	478,071.10	723,800.75	32.312908	-103.742710
4,900.00	5.86	127.81	4,894.72	-69.33	89.36	478,064.84	723,808.83	32.312891	-103.742684
5,000.00	5.86	127.81	4,994.20	-75.59	97.43	478,058.58	723,816.90	32.312874	-103.742658
5,100.00	5.86	127.81	5,093.67	-81.86	105.50	478,052.31	723,824.97	32.312856	-103.742632
5,200.00	5.86	127.81	5,193.15	-88.12	113.58	478,046.05	723,833.04	32.312839	-103.742606
5,300.00	5.86	127.81	5,292.63	-94.38	121.65	478,039.79	723,841.11	32.312822	-103.742580

Planning Report - Geographic

Database: EDM r5000.141_Prod US
 Company: WCDSC Permian NM
 Project: Eddy County (NAD 83 NM Eastern)
 Site: Sec 11-T23S-R31E
 Well: Belloq 11-2 Fed State Com 734H
 Wellbore: Wellbore #1
 Design: Permit Plan 2

Local Co-ordinate Reference: Well Belloq 11-2 Fed State Com 734H
 TVD Reference: RKB @ 3514.90ft
 MD Reference: RKB @ 3514.90ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,400.00	5.86	127.81	5,392.10	-100.64	129.72	478,033.53	723,849.18	32.312804	-103.742554
5,500.00	5.86	127.81	5,491.58	-106.91	137.79	478,027.26	723,857.26	32.312787	-103.742528
5,600.00	5.86	127.81	5,591.06	-113.17	145.86	478,021.00	723,865.33	32.312770	-103.742502
5,700.00	5.86	127.81	5,690.53	-119.43	153.93	478,014.74	723,873.40	32.312752	-103.742476
5,800.00	5.86	127.81	5,790.01	-125.69	162.01	478,008.48	723,881.47	32.312735	-103.742449
5,900.00	5.86	127.81	5,889.49	-131.96	170.08	478,002.21	723,889.54	32.312718	-103.742423
6,000.00	5.86	127.81	5,988.96	-138.22	178.15	477,995.95	723,897.62	32.312700	-103.742397
6,100.00	5.86	127.81	6,088.44	-144.48	186.22	477,989.69	723,905.69	32.312683	-103.742371
6,200.00	5.86	127.81	6,187.92	-150.74	194.29	477,983.43	723,913.76	32.312666	-103.742345
6,300.00	5.86	127.81	6,287.39	-157.01	202.37	477,977.16	723,921.83	32.312648	-103.742319
6,400.00	5.86	127.81	6,386.87	-163.27	210.44	477,970.90	723,929.90	32.312631	-103.742293
6,500.00	5.86	127.81	6,486.35	-169.53	218.51	477,964.64	723,937.97	32.312614	-103.742267
6,600.00	5.86	127.81	6,585.82	-175.80	226.58	477,958.38	723,946.05	32.312596	-103.742241
6,700.00	5.86	127.81	6,685.30	-182.06	234.65	477,952.11	723,954.12	32.312579	-103.742215
6,800.00	5.86	127.81	6,784.78	-188.32	242.72	477,945.85	723,962.19	32.312562	-103.742189
6,900.00	5.86	127.81	6,884.26	-194.58	250.80	477,939.59	723,970.26	32.312544	-103.742163
7,000.00	5.86	127.81	6,983.73	-200.85	258.87	477,933.33	723,978.33	32.312527	-103.742137
7,100.00	5.86	127.81	7,083.21	-207.11	266.94	477,927.06	723,986.41	32.312510	-103.742111
7,200.00	5.86	127.81	7,182.69	-213.37	275.01	477,920.80	723,994.48	32.312492	-103.742085
7,300.00	5.86	127.81	7,282.16	-219.63	283.08	477,914.54	724,002.55	32.312475	-103.742059
7,400.00	5.86	127.81	7,381.64	-225.90	291.15	477,908.28	724,010.62	32.312458	-103.742033
7,500.00	5.86	127.81	7,481.12	-232.16	299.23	477,902.01	724,018.69	32.312440	-103.742007
7,600.00	5.86	127.81	7,580.59	-238.42	307.30	477,895.75	724,026.76	32.312423	-103.741981
7,700.00	5.86	127.81	7,680.07	-244.68	315.37	477,889.49	724,034.84	32.312406	-103.741955
7,800.00	5.86	127.81	7,779.55	-250.95	323.44	477,883.22	724,042.91	32.312388	-103.741929
7,900.00	5.86	127.81	7,879.02	-257.21	331.51	477,876.96	724,050.98	32.312371	-103.741903
8,000.00	5.86	127.81	7,978.50	-263.47	339.59	477,870.70	724,059.05	32.312354	-103.741877
8,100.00	5.86	127.81	8,077.98	-269.73	347.66	477,864.44	724,067.12	32.312336	-103.741851
8,200.00	5.86	127.81	8,177.45	-276.00	355.73	477,858.17	724,075.19	32.312319	-103.741825
8,300.00	5.86	127.81	8,276.93	-282.26	363.80	477,851.91	724,083.27	32.312302	-103.741799
8,400.00	5.86	127.81	8,376.41	-288.52	371.87	477,845.65	724,091.34	32.312284	-103.741773
8,500.00	5.86	127.81	8,475.88	-294.78	379.94	477,839.39	724,099.41	32.312267	-103.741747
8,600.00	5.86	127.81	8,575.36	-301.05	388.02	477,833.12	724,107.48	32.312250	-103.741721
8,700.00	5.86	127.81	8,674.84	-307.31	396.09	477,826.86	724,115.55	32.312232	-103.741695
8,800.00	5.86	127.81	8,774.31	-313.57	404.16	477,820.60	724,123.63	32.312215	-103.741669
8,900.00	5.86	127.81	8,873.79	-319.83	412.23	477,814.34	724,131.70	32.312198	-103.741643
9,000.00	5.86	127.81	8,973.27	-326.10	420.30	477,808.07	724,139.77	32.312180	-103.741617
9,100.00	5.86	127.81	9,072.74	-332.36	428.38	477,801.81	724,147.84	32.312163	-103.741591
9,200.00	5.86	127.81	9,172.22	-338.62	436.45	477,795.55	724,155.91	32.312146	-103.741565
9,300.00	5.86	127.81	9,271.70	-344.89	444.52	477,789.29	724,163.98	32.312128	-103.741539
9,400.00	5.86	127.81	9,371.17	-351.15	452.59	477,783.02	724,172.06	32.312111	-103.741513
9,500.00	5.86	127.81	9,470.65	-357.41	460.66	477,776.76	724,180.13	32.312094	-103.741487
9,600.00	5.86	127.81	9,570.13	-363.67	468.73	477,770.50	724,188.20	32.312076	-103.741461
9,700.00	5.86	127.81	9,669.60	-369.94	476.81	477,764.24	724,196.27	32.312059	-103.741435
9,800.00	5.86	127.81	9,769.08	-376.20	484.88	477,757.97	724,204.34	32.312042	-103.741409
9,900.00	5.86	127.81	9,868.56	-382.46	492.95	477,751.71	724,212.41	32.312024	-103.741383
10,000.00	5.86	127.81	9,968.03	-388.72	501.02	477,745.45	724,220.49	32.312007	-103.741357
10,100.00	5.86	127.81	10,067.51	-394.99	509.09	477,739.19	724,228.56	32.311990	-103.741331
10,200.00	5.86	127.81	10,166.99	-401.25	517.16	477,732.92	724,236.63	32.311972	-103.741305
10,300.00	5.86	127.81	10,266.47	-407.51	525.24	477,726.66	724,244.70	32.311955	-103.741279
10,400.00	5.86	127.81	10,365.94	-413.77	533.31	477,720.40	724,252.77	32.311938	-103.741253
10,500.00	5.86	127.81	10,465.42	-420.04	541.38	477,714.14	724,260.85	32.311920	-103.741227
10,600.00	5.86	127.81	10,564.90	-426.30	549.45	477,707.87	724,268.92	32.311903	-103.741201
10,700.00	5.86	127.81	10,664.37	-432.56	557.52	477,701.61	724,276.99	32.311885	-103.741175
10,782.83	5.86	127.81	10,746.76	-437.75	564.21	477,696.42	724,283.67	32.311871	-103.741153

Planning Report - Geographic

Database: EDM r5000.141_Prod US
Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Site: Sec 11-T23S-R31E
Well: Belloq 11-2 Fed State Com 734H
Wellbore: Wellbore #1
Design: Permit Plan 2

Local Co-ordinate Reference: Well Belloq 11-2 Fed State Com 734H
TVD Reference: RKB @ 3514.90ft
MD Reference: RKB @ 3514.90ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,800.00	5.61	127.81	10,763.85	-438.80	565.57	477,695.37	724,285.03	32.311868	-103.741149
10,900.00	4.11	127.81	10,863.49	-443.99	572.25	477,690.18	724,291.72	32.311854	-103.741127
11,000.00	2.61	127.81	10,963.32	-447.58	576.88	477,686.59	724,296.34	32.311844	-103.741112
11,100.00	1.11	127.81	11,063.26	-449.56	579.44	477,684.61	724,298.90	32.311838	-103.741104
11,173.74	0.00	0.00	11,137.00	-450.00	580.00	477,684.17	724,299.47	32.311837	-103.741102
11,200.00	0.00	0.00	11,163.26	-450.00	580.00	477,684.17	724,299.47	32.311837	-103.741102
11,300.00	0.00	0.00	11,263.26	-450.00	580.00	477,684.17	724,299.47	32.311837	-103.741102
11,400.00	0.00	0.00	11,363.26	-450.00	580.00	477,684.17	724,299.47	32.311837	-103.741102
11,500.00	0.00	0.00	11,463.26	-450.00	580.00	477,684.17	724,299.47	32.311837	-103.741102
11,523.78	0.00	0.00	11,487.04	-450.00	580.00	477,684.17	724,299.47	32.311837	-103.741102
KOP @ 11524' MD, 50' FSL, 330' FEL									
11,600.00	7.62	359.65	11,563.03	-444.94	579.97	477,689.23	724,299.43	32.311851	-103.741102
11,700.00	17.62	359.65	11,660.49	-423.12	579.83	477,711.06	724,299.30	32.311911	-103.741102
11,765.00	24.12	359.65	11,721.19	-399.97	579.69	477,734.20	724,299.16	32.311975	-103.741102
FTP @ 11765' MD, 100' FSL, 330' FEL									
11,800.00	27.62	359.65	11,752.68	-384.70	579.60	477,749.47	724,299.06	32.312017	-103.741102
11,900.00	37.62	359.65	11,836.80	-330.86	579.27	477,803.31	724,298.73	32.312165	-103.741103
12,000.00	47.62	359.65	11,910.29	-263.23	578.85	477,870.94	724,298.31	32.312351	-103.741103
12,100.00	57.62	359.65	11,970.92	-183.87	578.36	477,950.30	724,297.83	32.312569	-103.741103
12,200.00	67.62	359.65	12,016.85	-95.19	577.81	478,038.98	724,297.28	32.312813	-103.741103
12,300.00	77.62	359.65	12,046.68	0.13	577.23	478,134.30	724,296.69	32.313075	-103.741103
12,400.00	87.62	359.65	12,059.51	99.17	576.62	478,233.34	724,296.08	32.313347	-103.741103
12,423.79	90.00	359.65	12,060.00	122.95	576.47	478,257.12	724,295.93	32.313412	-103.741104
12,500.00	90.00	359.65	12,060.00	199.16	576.00	478,333.33	724,295.46	32.313622	-103.741104
12,600.00	90.00	359.65	12,060.00	299.16	575.38	478,433.33	724,294.85	32.313897	-103.741104
12,700.00	90.00	359.65	12,060.00	399.16	574.77	478,533.33	724,294.23	32.314171	-103.741104
12,800.00	90.00	359.65	12,060.00	499.16	574.15	478,633.33	724,293.62	32.314446	-103.741104
12,900.00	90.00	359.65	12,060.00	599.15	573.53	478,733.32	724,293.00	32.314721	-103.741105
13,000.00	90.00	359.65	12,060.00	699.15	572.92	478,833.32	724,292.38	32.314996	-103.741105
13,100.00	90.00	359.65	12,060.00	799.15	572.30	478,933.32	724,291.77	32.315271	-103.741105
13,200.00	90.00	359.65	12,060.00	899.15	571.69	479,033.32	724,291.15	32.315546	-103.741105
13,300.00	90.00	359.65	12,060.00	999.15	571.07	479,133.31	724,290.53	32.315821	-103.741105
13,400.00	90.00	359.65	12,060.00	1,099.14	570.45	479,233.31	724,289.92	32.316096	-103.741106
13,500.00	90.00	359.65	12,060.00	1,199.14	569.84	479,333.31	724,289.30	32.316370	-103.741106
13,600.00	90.00	359.65	12,060.00	1,299.14	569.22	479,433.31	724,288.69	32.316645	-103.741106
13,700.00	90.00	359.65	12,060.00	1,399.14	568.60	479,533.31	724,288.07	32.316920	-103.741106
13,800.00	90.00	359.65	12,060.00	1,499.14	567.99	479,633.30	724,287.45	32.317195	-103.741106
13,900.00	90.00	359.65	12,060.00	1,599.13	567.37	479,733.30	724,286.84	32.317470	-103.741107
14,000.00	90.00	359.65	12,060.00	1,699.13	566.76	479,833.30	724,286.22	32.317745	-103.741107
14,100.00	90.00	359.65	12,060.00	1,799.13	566.14	479,933.30	724,285.61	32.318020	-103.741107
14,200.00	90.00	359.65	12,060.00	1,899.13	565.52	480,033.30	724,284.99	32.318295	-103.741107
14,300.00	90.00	359.65	12,060.00	1,999.13	564.91	480,133.29	724,284.37	32.318569	-103.741107
14,400.00	90.00	359.65	12,060.00	2,099.13	564.29	480,233.29	724,283.76	32.318844	-103.741108
14,500.00	90.00	359.65	12,060.00	2,199.12	563.68	480,333.29	724,283.14	32.319119	-103.741108
14,600.00	90.00	359.65	12,060.00	2,299.12	563.06	480,433.29	724,282.52	32.319394	-103.741108
14,700.00	90.00	359.65	12,060.00	2,399.12	562.44	480,533.29	724,281.91	32.319669	-103.741108
14,800.00	90.00	359.65	12,060.00	2,499.12	561.83	480,633.28	724,281.29	32.319944	-103.741108
14,900.00	90.00	359.65	12,060.00	2,599.12	561.21	480,733.28	724,280.68	32.320219	-103.741109
15,000.00	90.00	359.65	12,060.00	2,699.11	560.59	480,833.28	724,280.06	32.320494	-103.741109
15,100.00	90.00	359.65	12,060.00	2,799.11	559.98	480,933.28	724,279.44	32.320768	-103.741109
15,200.00	90.00	359.65	12,060.00	2,899.11	559.36	481,033.27	724,278.83	32.321043	-103.741109
15,300.00	90.00	359.65	12,060.00	2,999.11	558.75	481,133.27	724,278.21	32.321318	-103.741109
15,400.00	90.00	359.65	12,060.00	3,099.11	558.13	481,233.27	724,277.59	32.321593	-103.741110
15,500.00	90.00	359.65	12,060.00	3,199.10	557.51	481,333.27	724,276.98	32.321868	-103.741110

Planning Report - Geographic

Database: EDM r5000.141_Prod US
Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Site: Sec 11-T23S-R31E
Well: Belloq 11-2 Fed State Com 734H
Wellbore: Wellbore #1
Design: Permit Plan 2

Local Co-ordinate Reference: Well Belloq 11-2 Fed State Com 734H
TVD Reference: RKB @ 3514.90ft
MD Reference: RKB @ 3514.90ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
15,600.00	90.00	359.65	12,060.00	3,299.10	556.90	481,433.27	724,276.36	32.322143	-103.741110	
15,700.00	90.00	359.65	12,060.00	3,399.10	556.28	481,533.26	724,275.75	32.322418	-103.741110	
15,800.00	90.00	359.65	12,060.00	3,499.10	555.66	481,633.26	724,275.13	32.322693	-103.741110	
15,900.00	90.00	359.65	12,060.00	3,599.10	555.05	481,733.26	724,274.51	32.322967	-103.741111	
16,000.00	90.00	359.65	12,060.00	3,699.09	554.43	481,833.26	724,273.90	32.323242	-103.741111	
16,100.00	90.00	359.65	12,060.00	3,799.09	553.82	481,933.26	724,273.28	32.323517	-103.741111	
16,200.00	90.00	359.65	12,060.00	3,899.09	553.20	482,033.25	724,272.66	32.323792	-103.741111	
16,300.00	90.00	359.65	12,060.00	3,999.09	552.58	482,133.25	724,272.05	32.324067	-103.741112	
16,400.00	90.00	359.65	12,060.00	4,099.09	551.97	482,233.25	724,271.43	32.324342	-103.741112	
16,500.00	90.00	359.65	12,060.00	4,199.09	551.35	482,333.25	724,270.82	32.324617	-103.741112	
16,600.00	90.00	359.65	12,060.00	4,299.08	550.73	482,433.25	724,270.20	32.324892	-103.741112	
16,700.00	90.00	359.65	12,060.00	4,399.08	550.12	482,533.24	724,269.58	32.325166	-103.741112	
16,800.00	90.00	359.65	12,060.00	4,499.08	549.50	482,633.24	724,268.97	32.325441	-103.741113	
16,900.00	90.00	359.65	12,060.00	4,599.08	548.89	482,733.24	724,268.35	32.325716	-103.741113	
17,000.00	90.00	359.65	12,060.00	4,699.08	548.27	482,833.24	724,267.73	32.325991	-103.741113	
17,079.00	90.00	359.65	12,060.00	4,778.07	547.78	482,912.24	724,267.25	32.326208	-103.741113	
Cross section @ 17079' MD, 0' FSL, 330' FEL										
17,100.00	90.00	359.65	12,060.00	4,799.07	547.65	482,933.24	724,267.12	32.326266	-103.741113	
17,200.00	90.00	359.65	12,060.00	4,899.07	547.04	483,033.23	724,266.50	32.326541	-103.741113	
17,300.00	90.00	359.65	12,060.00	4,999.07	546.42	483,133.23	724,265.89	32.326816	-103.741114	
17,400.00	90.00	359.65	12,060.00	5,099.07	545.80	483,233.23	724,265.27	32.327091	-103.741114	
17,500.00	90.00	359.65	12,060.00	5,199.07	545.19	483,333.23	724,264.65	32.327365	-103.741114	
17,600.00	90.00	359.65	12,060.00	5,299.06	544.57	483,433.22	724,264.04	32.327640	-103.741114	
17,700.00	90.00	359.65	12,060.00	5,399.06	543.96	483,533.22	724,263.42	32.327915	-103.741114	
17,800.00	90.00	359.65	12,060.00	5,499.06	543.34	483,633.22	724,262.80	32.328190	-103.741115	
17,900.00	90.00	359.65	12,060.00	5,599.06	542.72	483,733.22	724,262.19	32.328465	-103.741115	
18,000.00	90.00	359.65	12,060.00	5,699.06	542.11	483,833.22	724,261.57	32.328740	-103.741115	
18,100.00	90.00	359.65	12,060.00	5,799.06	541.49	483,933.21	724,260.96	32.329015	-103.741115	
18,200.00	90.00	359.65	12,060.00	5,899.05	540.87	484,033.21	724,260.34	32.329290	-103.741115	
18,300.00	90.00	359.65	12,060.00	5,999.05	540.26	484,133.21	724,259.72	32.329564	-103.741116	
18,400.00	90.00	359.65	12,060.00	6,099.05	539.64	484,233.21	724,259.11	32.329839	-103.741116	
18,500.00	90.00	359.65	12,060.00	6,199.05	539.03	484,333.21	724,258.49	32.330114	-103.741116	
18,600.00	90.00	359.65	12,060.00	6,299.05	538.41	484,433.20	724,257.88	32.330389	-103.741116	
18,700.00	90.00	359.65	12,060.00	6,399.04	537.79	484,533.20	724,257.26	32.330664	-103.741116	
18,800.00	90.00	359.65	12,060.00	6,499.04	537.18	484,633.20	724,256.64	32.330939	-103.741117	
18,900.00	90.00	359.65	12,060.00	6,599.04	536.56	484,733.20	724,256.03	32.331214	-103.741117	
19,000.00	90.00	359.65	12,060.00	6,699.04	535.95	484,833.20	724,255.41	32.331489	-103.741117	
19,100.00	90.00	359.65	12,060.00	6,799.04	535.33	484,933.19	724,254.79	32.331763	-103.741117	
19,200.00	90.00	359.65	12,060.00	6,899.03	534.71	485,033.19	724,254.18	32.332038	-103.741117	
19,300.00	90.00	359.65	12,060.00	6,999.03	534.10	485,133.19	724,253.56	32.332313	-103.741118	
19,400.00	90.00	359.65	12,060.00	7,099.03	533.48	485,233.19	724,252.95	32.332588	-103.741118	
19,500.00	90.00	359.65	12,060.00	7,199.03	532.86	485,333.18	724,252.33	32.332863	-103.741118	
19,600.00	90.00	359.65	12,060.00	7,299.03	532.25	485,433.18	724,251.71	32.333138	-103.741118	
19,700.00	90.00	359.65	12,060.00	7,399.02	531.63	485,533.18	724,251.10	32.333413	-103.741118	
19,800.00	90.00	359.65	12,060.00	7,499.02	531.02	485,633.18	724,250.48	32.333688	-103.741119	
19,900.00	90.00	359.65	12,060.00	7,599.02	530.40	485,733.18	724,249.86	32.333962	-103.741119	
20,000.00	90.00	359.65	12,060.00	7,699.02	529.78	485,833.17	724,249.25	32.334237	-103.741119	
20,100.00	90.00	359.65	12,060.00	7,799.02	529.17	485,933.17	724,248.63	32.334512	-103.741119	
20,200.00	90.00	359.65	12,060.00	7,899.02	528.55	486,033.17	724,248.02	32.334787	-103.741120	
20,300.00	90.00	359.65	12,060.00	7,999.01	527.93	486,133.17	724,247.40	32.335062	-103.741120	
20,400.00	90.00	359.65	12,060.00	8,099.01	527.32	486,233.17	724,246.78	32.335337	-103.741120	
20,500.00	90.00	359.65	12,060.00	8,199.01	526.70	486,333.16	724,246.17	32.335612	-103.741120	
20,600.00	90.00	359.65	12,060.00	8,299.01	526.09	486,433.16	724,245.55	32.335887	-103.741120	
20,700.00	90.00	359.65	12,060.00	8,399.01	525.47	486,533.16	724,244.93	32.336161	-103.741121	

Planning Report - Geographic

Database:	EDM r5000.141_Prod US
Company:	WCDSC Permian NM
Project:	Eddy County (NAD 83 NM Eastern)
Site:	Sec 11-T23S-R31E
Well:	Belloq 11-2 Fed State Com 734H
Wellbore:	Wellbore #1
Design:	Permit Plan 2

Local Co-ordinate Reference:	Well Belloq 11-2 Fed State Com 734H
TVD Reference:	RKB @ 3514.90ft
MD Reference:	RKB @ 3514.90ft
North Reference:	Grid
Survey Calculation Method:	Minimum Curvature

Planned Survey

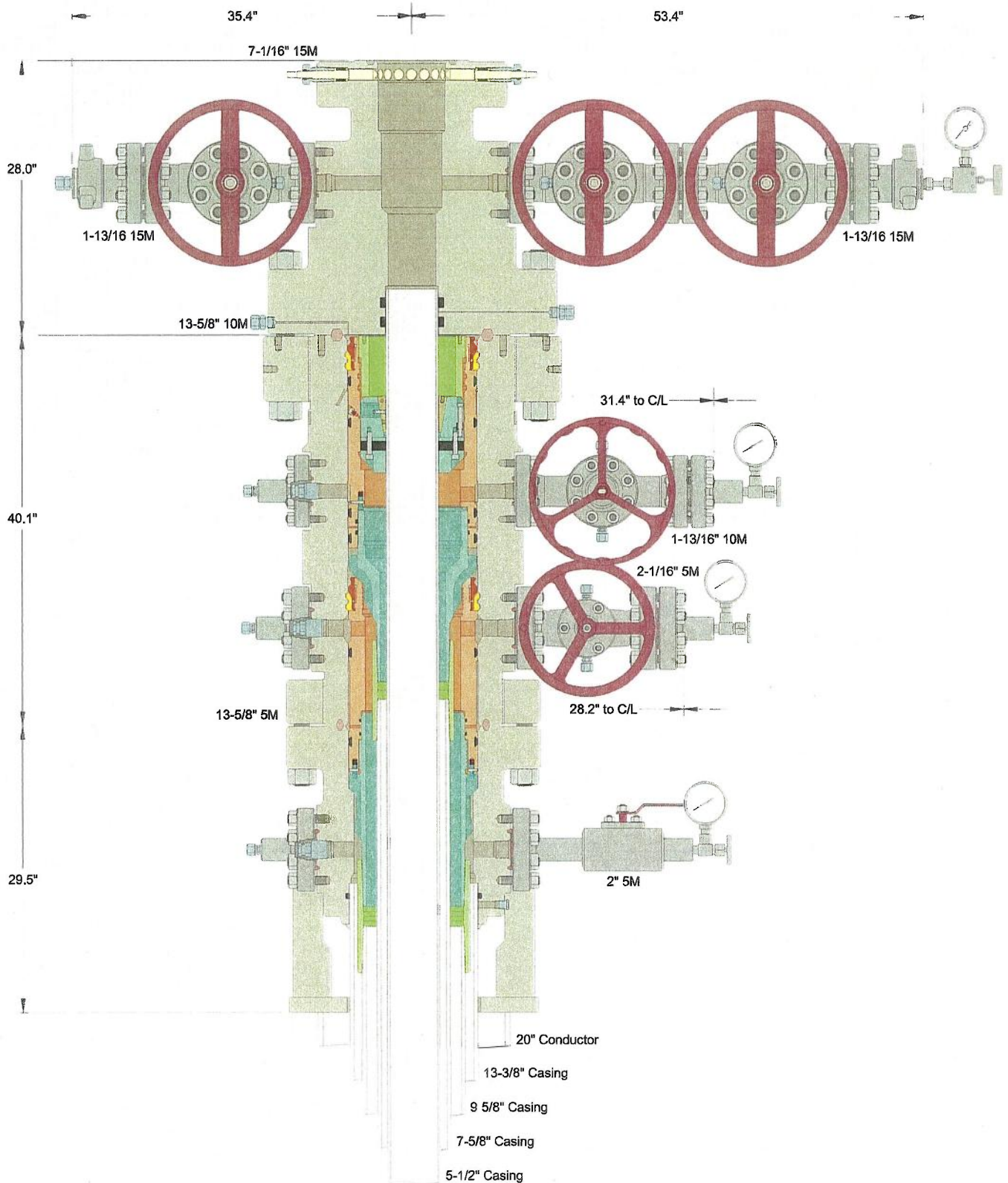
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
20,800.00	90.00	359.65	12,060.00	8,499.00	524.85	486,633.16	724,244.32	32.336436	-103.741121
20,900.00	90.00	359.65	12,060.00	8,599.00	524.24	486,733.16	724,243.70	32.336711	-103.741121
21,000.00	90.00	359.65	12,060.00	8,699.00	523.62	486,833.15	724,243.09	32.336986	-103.741121
21,100.00	90.00	359.65	12,060.00	8,799.00	523.00	486,933.15	724,242.47	32.337261	-103.741121
21,200.00	90.00	359.65	12,060.00	8,899.00	522.39	487,033.15	724,241.85	32.337536	-103.741122
21,300.00	90.00	359.65	12,060.00	8,998.99	521.77	487,133.15	724,241.24	32.337811	-103.741122
21,400.00	90.00	359.65	12,060.00	9,098.99	521.16	487,233.15	724,240.62	32.338086	-103.741122
21,500.00	90.00	359.65	12,060.00	9,198.99	520.54	487,333.14	724,240.00	32.338360	-103.741122
21,600.00	90.00	359.65	12,060.00	9,298.99	519.92	487,433.14	724,239.39	32.338635	-103.741122
21,700.00	90.00	359.65	12,060.00	9,398.99	519.31	487,533.14	724,238.77	32.338910	-103.741123
21,800.00	90.00	359.65	12,060.00	9,498.98	518.69	487,633.14	724,238.16	32.339185	-103.741123
21,900.00	90.00	359.65	12,060.00	9,598.98	518.07	487,733.13	724,237.54	32.339460	-103.741123
22,000.00	90.00	359.65	12,060.00	9,698.98	517.46	487,833.13	724,236.92	32.339735	-103.741123
22,100.00	90.00	359.65	12,060.00	9,798.98	516.84	487,933.13	724,236.31	32.340010	-103.741123
22,200.00	90.00	359.65	12,060.00	9,898.98	516.23	488,033.13	724,235.69	32.340285	-103.741124
22,260.00	90.00	359.65	12,060.00	9,958.98	515.86	488,093.13	724,235.32	32.340449	-103.741124
LTP @ 22260' MD, 100' FNL, 330' FEL									
22,300.00	90.00	359.65	12,060.00	9,998.98	515.61	488,133.13	724,235.07	32.340559	-103.741124
22,340.34	90.00	359.65	12,060.00	10,039.31	515.36	488,173.47	724,234.83	32.340670	-103.741124
PBHL; 20' FNL, 330' FEL									
22,340.35	90.00	359.65	12,060.00	10,039.32	515.36	488,173.47	724,234.83	32.340670	-103.741124

Design Targets

[illegible]

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
11,523.78	11,487.04	-450.00	580.00	KOP @ 11524' MD, 50' FSL, 330' FEL
11,765.00	11,721.19	-399.97	579.69	FTP @ 11765' MD, 100' FSL, 330' FEL
17,079.00	12,060.00	4,778.07	547.78	Cross section @ 17079' MD, 0' FSL, 330' FEL
22,260.00	12,060.00	9,958.98	515.86	LTP @ 22260' MD, 100' FNL, 330' FEL
22,340.34	12,060.00	10,039.31	515.36	PBHL, 20' FNL, 330' FEL



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ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC

MATADOR RESOURCES
WOLFCAMP A WELLS (TEXAS)

20" x 13-3/8" x 9-5/8" x 7-5/8" x 5-1/2" MBU-4T-SOW Wellhead
With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head,
9-5/8" & 7-5/8" Mandrel Hangers And 5-1/2" Slip Casing Hanger

DRAWN	DLE	09AUG19
APPRV		
DRAWING NO.	HBE0000156	

Devon's proposed wellhead

A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Devon proposes using 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 surface casing shoe shall be 5000 (5M) psi.

- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 5M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

After running the surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 5M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 5,000 psi high pressure test. The 5,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.

After running both the first and second intermediate casing strings with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 5M will already be installed on the wellhead.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 5,000 psi WP.

Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron. manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.



API 5CT 10.750" 45.50lb/ft HCL80 Casing Performance Data Sheet

Manufactured to specifications of API 5CT 9th edition and bears the API monogram.

Grade	HCL80
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Pipe Body Mechanical Properties

Minimum Yield Strength	80,000 psi
Maximum Yield Strength	95,000 psi
Minimum Tensile Strength	95,000 psi
Maximum Hardness	23.0 HRC

Sizes

OD	10 3/4
Nominal Wall Thickness	.400 in
Nominal Weight, T&C	45.50 lb/ft
Nominal Weight, PE	44.26 lb/ft
Nominal ID	9.950 in
Standard Drift	9.794 in
Alternate Drift	9.875 in

<u>Coupling Special Clearance</u>	<u>Size</u>
OD	11.25 in
Min. Length	10.625 in
Diameter of Counter Bore	10.890 in
Width of bearing face	.375 in

Minimum Performance

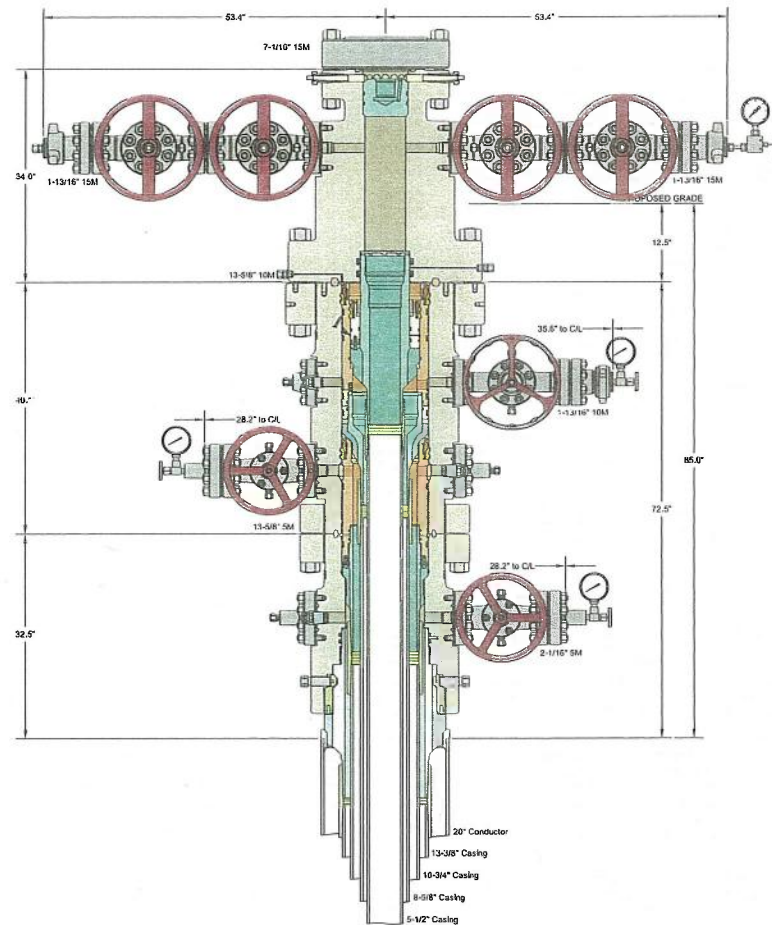
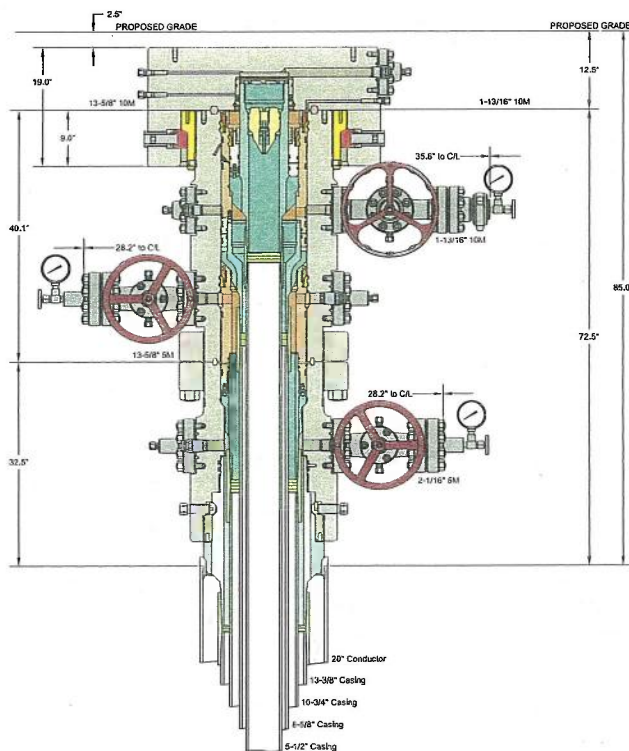
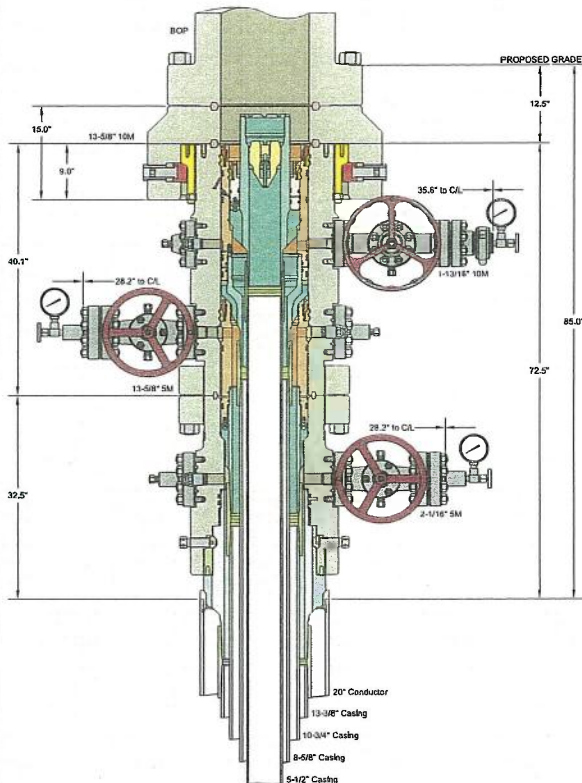
Collapse Pressure	2,940 psi
Internal Pressure Yield	5,210 psi
Pipe body Tension Yield	1,040,000 lbs
Joint Strength STC	692,000 lbs
Joint Strength LTC	N/A
Joint Strength BTC	1,063,000 lbs

Inspection and Testing

Visual	OD Longitudinal and independent 3rd party SEA
NDT	Independent 3rd party full body EMI and End Area Inspection after hydrotest Calibration notch sensitivity: 10% of specified wall thickness

Color code

Pipe ends	One red, one brown and one blue band
Couplings	Red with one brown band



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CACTUS WELLHEAD LLC

13-3/8" x 10-3/4" x 8-5/8" x 5-1/2" MBU-4T-CFL Wellhead System
With 10-3/4", 8-5/8" & 5-1/2" Pin Bottom Mandrel Casing Hangers
And 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head

ALL DIMENSIONS APPROXIMATE

DEVON ENERGY
HOBBS

DRAWN	DLE	24JAN20
APPRV		

DRAWING NO. SDT-2528-1