F/F

Form 3160-3
(March 2012)

HOBBS OCD

JAN 03 2018

RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM27506

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

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

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.: (320547) SD EA 29 32 FED COM P11 14H

2. Name of Operator: CHEVRON USA INCORPORATED (4323)

9. API Well No.: 30-025-44334

3a. Address: 6301 Deauville Blvd. Midland TX 79706

3b. Phone No. *(include area code)*: (432)687-7866

10. Field and Pool, or Exploratory: (98097) WC025G09S263327G / UPPER WOLFC

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: NWNW / 195 FNL / 853 FWL / LAT 32.021226 / LONG -103.600054

At proposed prod. zone: LOT 4 / 180 FSL / 750 FWL / LAT 32.000736 / LONG -103.600352

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 29 / T26S / R33E / NMP

14. Distance in miles and direction from nearest town or post office*: 33 miles

12. County or Parish: LEA

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 330 feet

16. No. of acres in lease: 1517.74

17. Spacing Unit dedicated to this well: 237.34

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 813 feet

19. Proposed Depth: 12523 feet / 23000 feet

20. BLM/BIA Bond No. on file: FED: CA0329

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3215 feet

22. Approximate date work will start*: 10/15/2018

23. Estimated duration: 120 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Denise Pinkerton / Ph: (432)687-7375	07/12/2017

Title: Regulatory Specialist

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Bobby Ballard / Ph: (575)234-2235	12/20/2017

Title	Office
Natural Resource Specialist	CARLSBAD

Application approval 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.
Conditions of approval, if any, are attached.

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.

(Continued on page 2)

*(Instructions on page 2)

APPROVED WITH CONDITIONS

Approval Date: 12/20/2017

KZ 01/08/18

Denise Pinkerton

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160
PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.
ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.
EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Continued on page 3)

Additional Operator Remarks

Location of Well

1. SHL: NWNW / 195 FNL / 853 FWL / TWSP: 26S / RANGE: 33E / SECTION: 29 / LAT: 32.021226 / LONG: -103.600054 (TVD: 0 feet, MD: 0 feet)
   PPP: NWNW / 330 FNL / 750 FWL / TWSP: 26S / RANGE: 33E / SECTION: 29 / LAT: 32.020855 / LONG: -103.600386 (TVD: 12140 feet, MD: 12140 feet)
   BHL: LOT 4 / 180 FSL / 750 FWL / TWSP: 26S / RANGE: 33E / SECTION: 32 / LAT: 32.000736 / LONG: -103.600352 (TVD: 12523 feet, MD: 23000 feet)

BLM Point of Contact

Name: Judith Yeager
Title: Legal Instruments Examiner
Phone: 5752345936
Email: jyeager@blm.gov

Approval Date: 12/20/2017

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Application Data Report

12/21/2017

APD ID: 10400015084 **Submission Date:** 07/12/2017

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400015084 **Tie to previous NOS?** **Submission Date:** 07/12/2017

BLM Office: CARLSBAD **User:** Denise Pinkerton **Title:** Regulatory Specialist

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMNM27506 **Lease Acres:** 1517.74

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? NO

Permitting Agent? NO **APD Operator:** CHEVRON USA INCORPORATED

Operator letter of designation:

Operator Info

Operator Organization Name: CHEVRON USA INCORPORATED

Operator Address: 6301 Deauville Blvd.

Zip: 79706

Operator PO Box:

Operator City: Midland **State:** TX

Operator Phone: (432)687-7866

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO **Mater Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** WC025G09S263327G **Pool Name:** UPPER WOLFCAMP

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

Describe other minerals:

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** NO **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** SD EA 29 32 FED COM P11 **Number:** 13H 14H 15H 16H

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 33 Miles **Distance to nearest well:** 813 FT **Distance to lease line:** 330 FT

Reservoir well spacing assigned acres Measurement: 237.34 Acres

Well plat: SD_EA_29_32_P11_14H_C102_07-12-2017.pdf

SD_EA_29_32_Fed_Com_P11_14H_Well_Plat_07-12-2017.pdf

Well work start Date: 10/15/2018 **Duration:** 120 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number:

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	195	FNL	853	FWL	26S	33E	29	Aliquot NWNW	32.021226	-103.600054	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 27506	3215	0	0
KOP Leg #1	195	FNL	853	FWL	26S	33E	29	Aliquot NWNW	32.021226	-103.600054	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 27506	3215	0	0
PPP Leg #1	330	FNL	750	FWL	26S	33E	29	Aliquot NWNW	32.020855	-103.600386	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 27506	-8925	12140	12140

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
EXIT Leg #1	330	FSL	750	FWL	26S	33E	32	Lot 4	32.001149	-103.600353	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-8925	12140	12140
BHL Leg #1	180	FSL	750	FWL	26S	33E	32	Lot 4	32.000736	-103.600352	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-9308	23000	12523

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report

12/21/2017

APD ID: 10400015084 **Submission Date:** 07/12/2017

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	RUSTLER	3215	800	800	ANHYDRITE	NONE	No
2	CASTILE	-3480	3480	3480	LIMESTONE,ANHYDRITE	NONE	No
3	LAMAR	-4900	4900	4900	LIMESTONE	NONE	No
4	BELL CANYON	-4930	4930	4930	SANDSTONE	NONE	No
5	CHERRY CANYON	-5970	5970	5970	SANDSTONE	NONE	No
6	BRUSHY CANYON	-7620	7620	7620	SANDSTONE	NONE	No
7	BONE SPRING LIME	-9090	9090	9090	LIMESTONE	NONE	No
8	UPPER AVALON SHALE	-9120	9120	9120	SHALE	NONE	No
9	BONE SPRING 1ST	-10040	10040	10040	SANDSTONE	NONE	No
10	BONE SPRING 2ND	-10700	10700	10700	SHALE	NONE	No
11	BONE SPRING 3RD	-11740	11740	11740	LIMESTONE	NONE	No
12	WOLFCAMP	-12140	12140	23000	MUDSTONE	NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M **Rating Depth:** 12523

Equipment: Will have a minimum of a 10000 psi rig stack (see proposed schematic) for drill out below surface casing. Wolfcamp is not exposed until drillout of the inter csg. Could possibly use the 5M rig stack for drillout below surf csg due to availability of 10M annular.Stack will be tested as specified in the attached testing requirements. Batch drilling of the surface, intermediate, and production will take place. A full BOP test will be performed unless approval from BLM is received otherwise. Flex choke hose will be used for all wells on the pad. BOP test will be conducted by a 3rd party.
Requesting Variance? YES

Variance request: Chevron requests a variance to use a FMC UH2 Multibowl wellhead, which will be run through the rig floor on surface casing. BOPE will be nippled up and tested after cementing surface casing. Subsequent tests will be

performed as needed, not to exceed 30 days. The field report from FMC and BOP test information will be provided in a subsequent report at the end of the well. Please see the attached wellhead schematic. An installation manual has been placed on file with the BLM office and remains unchanged from previous submittal. ALSO, REQUEST VARIANCE for flex choke hose, to be used for all wells on the pad. (See attached spec).

Testing Procedure: Test BOP from 250 psi to 5000 psi in Ram and 250 psi to 3500 psi in Annular, as outlined in Onshore Order #2. Stack will be tested as specified in the attached testing requirements. Full BOP test will be performed unless approval from BLM is recvd otherwise. BOP test will be conducted by a 3rd party. Subsequent tests will be performed as needed, not to exceed 30 days. Field report from FMC and BOP test info will be provided in a subsequent report at the end of the well. Installation manual has been placed on file with the BLM office and remains unchanged from previous submittal.

Choke Diagram Attachment:

Choke_hose_Spec_X30_20170918090349.pdf

1684_001_20170918090402.pdf

BOP Diagram Attachment:

10M_BOP_Choke_Schematics_BLM_new_20170918090419.pdf

UH_2_10K_20170918090431.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	800	0	800	-9308	-10108	800	J-55	55	STC	3.12	1.36	DRY	1.7	DRY	3.17
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	11500	0	11500	-9308	-20808	11500	HCL-80	43.5	LTC	1.44	1.12	DRY	1.37	DRY	1.93
3	LINER	8.5	7.625	NEW	API	N	10850	12300	10850	-12300			1450	HCP-110	29.7	OTHER - H513	5.36	1.69	DRY	2.5	DRY	2.09
4	PRODUCTION	6.75	5.5	NEW	API	N	0	12500	0	-12500	-9308	-32308	12500	P-110	20	OTHER - TXP BTC	1.23	1.11	DRY	1.97	DRY	1.37
5	PRODUCTION	6.75	5.0	NEW	API	Y	12500	23000	12500	-23000			10500	P-110	18	OTHER - TSH521	1.23	1.11	DRY	1.97	DRY	1.37

Casing Attachments

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

SD_EA_29_32_P11_14H_9_PT_PLAN_20170918090623.pdf

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

SD_EA_29_32_P11_14H_9_PT_PLAN_20170918090752.pdf

9.625_43.5lb_L80IC_LTC_20170918090954.pdf

Casing ID: 3 **String Type:** LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

7.625_Casing_Liner_20170918092213.pdf

SD_EA_29_32_P11_14H_9_PT_PLAN_20170918093025.pdf

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

Casing Attachments

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

SD_EA_29_32_P11_14H_9_PT_PLAN_20170918091052.pdf

TenarisXP_BTC_5.500_20_P110_ICY_20170918091107.PDF

Casing ID: 5 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

5_INCH_18LB_P110_IC_521_20170918091325.pdf
SD_EA_29_32_P11_14H_9_PT_PLAN_20170918091409.pdf
5_INCH_18LB_P110_ICY_90PERCENT_RBW_TXP_20170918091348.PDF
5_INCH_18LB_P110_ICY_90PERCENT_RBW_521_20170918091339.pdf

Casing Design Assumptions and Worksheet(s):

SD_EA_29_32_P11_14H_9_PT_PLAN_20170918093204.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	800	650	1.33	14.8	6.57	50	C	CL C
INTERMEDIATE	Lead	4870	0	4570	1070	2.39	11.9	13.46	100	C	CLASS C

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Tail		4570	4870	89	1.33	14.8	6.35	25	C	CL C ANTIFOAM RETARDER VISCOSIFIER
INTERMEDIATE	Lead	4870	4870	10650	1024	2.21	11.9	12.18	25	50:50 POZ CLASS C	50/50 POZ CL H, ANTIFOAM, EXTENDER, SALT, RETARDER
INTERMEDIATE	Tail		10650	11150	184	1.22	15.6	5.37	25	CLASS H	CL H RETARDER DISPERSANT
LINER	Lead		10850	12300	123	1.22	15.6	5.34	17	CLASS H	NONE
PRODUCTION	Lead		10350	23000	1300	1.22	15.6	5.05	10	ACID SOLUBLE	CL H VISCOSIFIER ANTIFOAM DISPERSANT FLUID LOSS RETARDER, EXPANDING AGENT
PRODUCTION	Lead		10350	23000	1300	1.22	15.6	5.05	10	acid soluble	none

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: a closed system will be utilized consisting of above ground steel tanks. All wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in an approved sanitary landfill. Sanitary wastes will be contained in a chemical port-toilet and then hauled to an approved sanitary landfill. all fluids and cuttings will be disposed of in accordance with NMOCD regulations.

Describe the mud monitoring system utilized: a mud test shall be performed every 24 hours after mudding up to determine as applicable density viscosity, gel strength, filtration, and pH. Visual Mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume. When abnormal pressures are anticipated a PVT, Stroke counter, flow sensor, will be used to detect volume changes indicating loss or gain of circulating fluid volume

Circulating Medium Table

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
11150	12300	OIL-BASED MUD	9.5	13.5							
0	800	SPUD MUD	8.3	8.7							
800	11150	OIL-BASED MUD	8.7	9.2							
12300	23000	OIL-BASED MUD	12	15							the mud weights will range depending on the targeted formation. a weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost circulation as hole conditions dictate. To control pressure we are using 11.0 and may end up using heavier mud weight 13.0-14.0.

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

drill stem tests are not planned
the logging program attached to 9PT Plan

List of open and cased hole logs run in the well:

CBL,GR,MWD

Coring operation description for the well:

conventional whole core samples are not planned
a direction survey will be run

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 9768 **Anticipated Surface Pressure:** 7012.94

Anticipated Bottom Hole Temperature(F): 150

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

SD_EA_29_32_Fed_Com_P11_H2S_07-12-2017.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

SD_EA_29_32_P11_14H_PLOT_07-12-2017.pdf

SD_EA_29_32_P11_14H_DIREC_SURV_07-12-2017.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Gas_Capture_Plan_Form_Pad_11_20170918094255.pdf

Other Variance attachment:

Continental

ContiTech

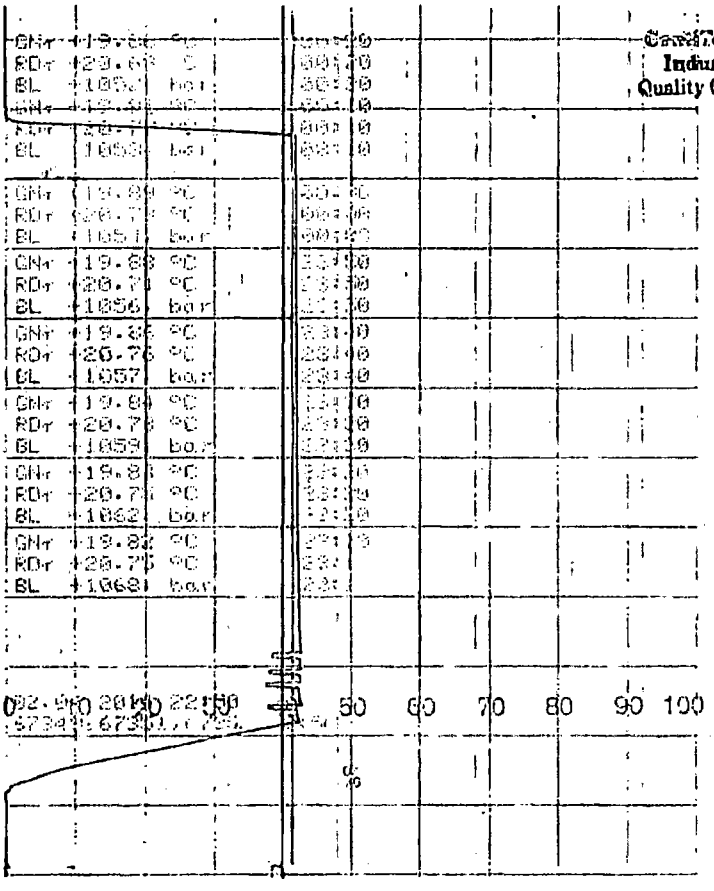
Hose Data Sheet

CRI Order No.	538332
Customer	ContiTech Oil & Marine Corp.
Customer Order No	4500412631 CBC544771, CBC544769, CBC544767, CBC544763, CBC544768, CBC544745, CBC544744, CBC544746
Item No.	1
Hose Type	Flexible Hose
Standard	**API SPEC 16 C**
Inside dia in inches	3
Length	45 ft
Type of coupling one end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOURC/W BX155 ST/ST INLAID R.GR.
Type of coupling other end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOUR C/W BX155 ST/ST INLAID R.GR.
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St.steel outer wrap
Internal stripwound tube	No
Lining	OIL + GAS RESISTANT SOUR
Safety clamp	Yes
Lifting collar	Yes
Element C	Yes
Safety chain	Yes
Safety wire rope	No
Max.design temperature [°C]	100
Min.design temperature [°C]	-20
Min. Bend Radius operating [m]	0,90
Min. Bend Radius storage [m]	0,90
Electrical continuity	The Hose is electrically continuous
Type of packing	WOODEN CRATE ISPM-15

ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE *No: 594, 596, 597*

Page: 1 / 1

CamTech Rubber
Industrial Kit.
Quality Control Dept.
(1)



Continental

ContiTech

CONTITECH RUBBER Industrial Kft.	No:QC-DB- 231/ 2014
	Page: 10 / 119

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE

CERT. N°: 594

PURCHASER:	ContiTech Oil & Marine Corp.	P.O. N°:	4500412631
CONTITECH ORDER N°:	538332	HOSE TYPE:	3" ID Choke & Kill Hose
HOSE SERIAL N°:	67349	NOMINAL / ACTUAL LENGTH:	13,72 m / 13,85 m

W.P.	68,9	MPa	10000	psi	T.P. 103,4	MPa	15000	psi

Duration: 60 min.

Pressure test with water at ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.

→ 10 mm = 25 MPa

COUPLINGS Type	Serial N°		Quality	Heat N°
3" coupling with	1435	1436	AISI 4130	A1258U
4 1/16" 10K API Swivel Flange end			AISI 4130	034939
Hub			AISI 4130	A1045N

Not Designed For Well Testing **API Spec 16 C**

Tag No.: 66 – 1198 **Temperature rate:"B"**

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.

Date:	Inspector	Quality Control
03. April 2014.		ContiTech Rubber Industrial Kft. Quality Control Dept. (1)

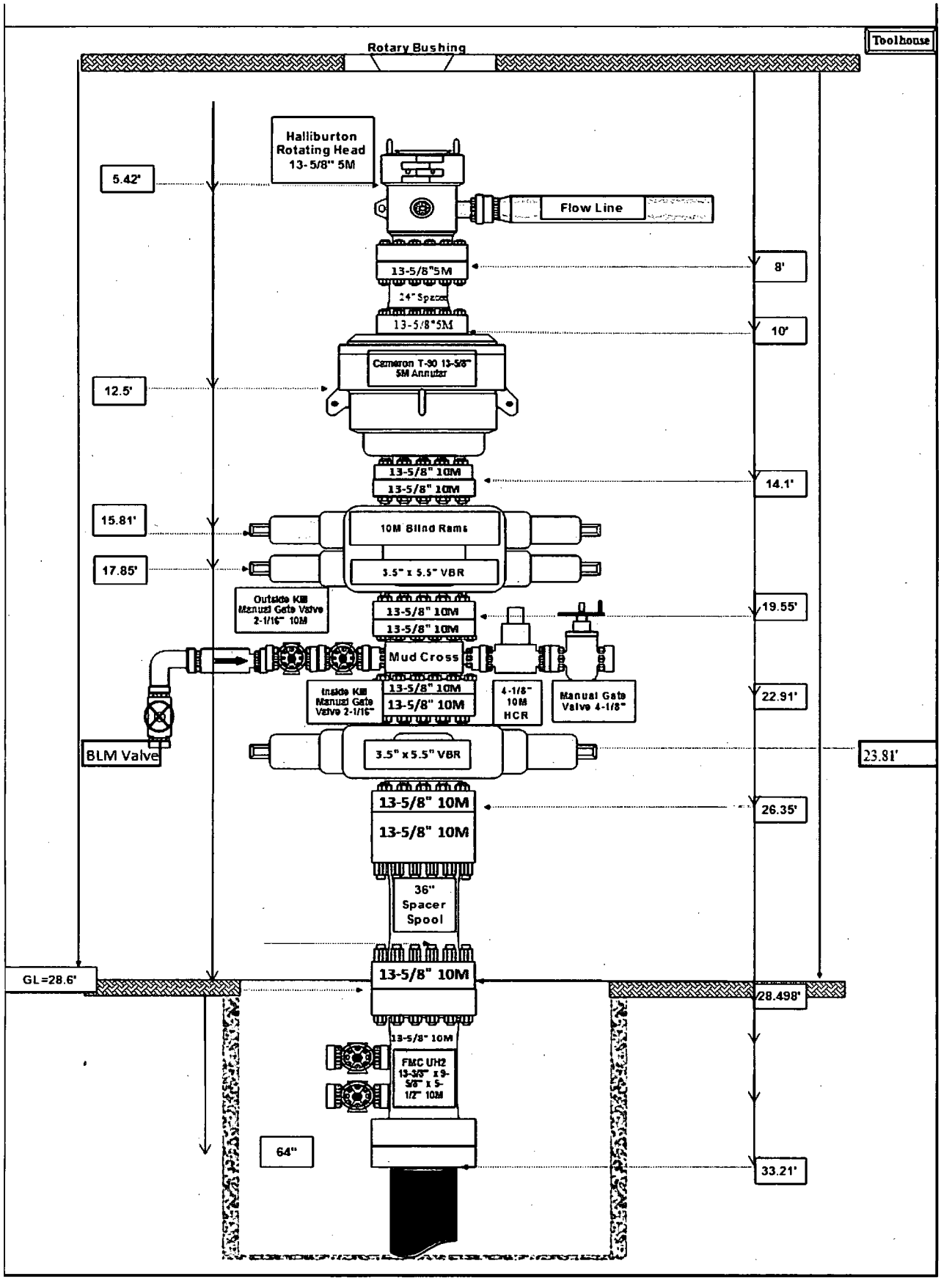

Rotary Bushing
Toolhouse
Halliburton Rotating Head 13-5/8" 5M
5.42'
Flow Line
13-5/8"5M
8'
24" Spacer
13-5/8"5M
10'
Cameron T-90 13-5/8" 5M Annular
12.5'
13-5/8" 10M
13-5/8" 10M
14.1'
15.81'
10M Blind Rams
17.85'
3.5" x 5.5" VBR
Outside Kill Manual Gate Valve 2-1/16" 10M
13-5/8" 10M
13-5/8" 10M
19.55'
Mud Cross
Inside Kill Manual Gate Valve 2-1/16"
13-5/8" 10M
13-5/8" 10M
4-1/8" 10M HCR
Manual Gate Valve 4-1/8"
22.91'
BLM Valve
3.5" x 5.5" VBR
23.81'
13-5/8" 10M
13-5/8" 10M
26.35'
36" Spacer Spool
13-5/8" 10M
GL=28.6'
28.498'
13-5/8" 10M
FMC UH2 13-3/8" x 9-5/8" x 5-1/2" 10M
64"
33.21'

Diagram A

CHOKE MANIFOLD SCHEMATIC

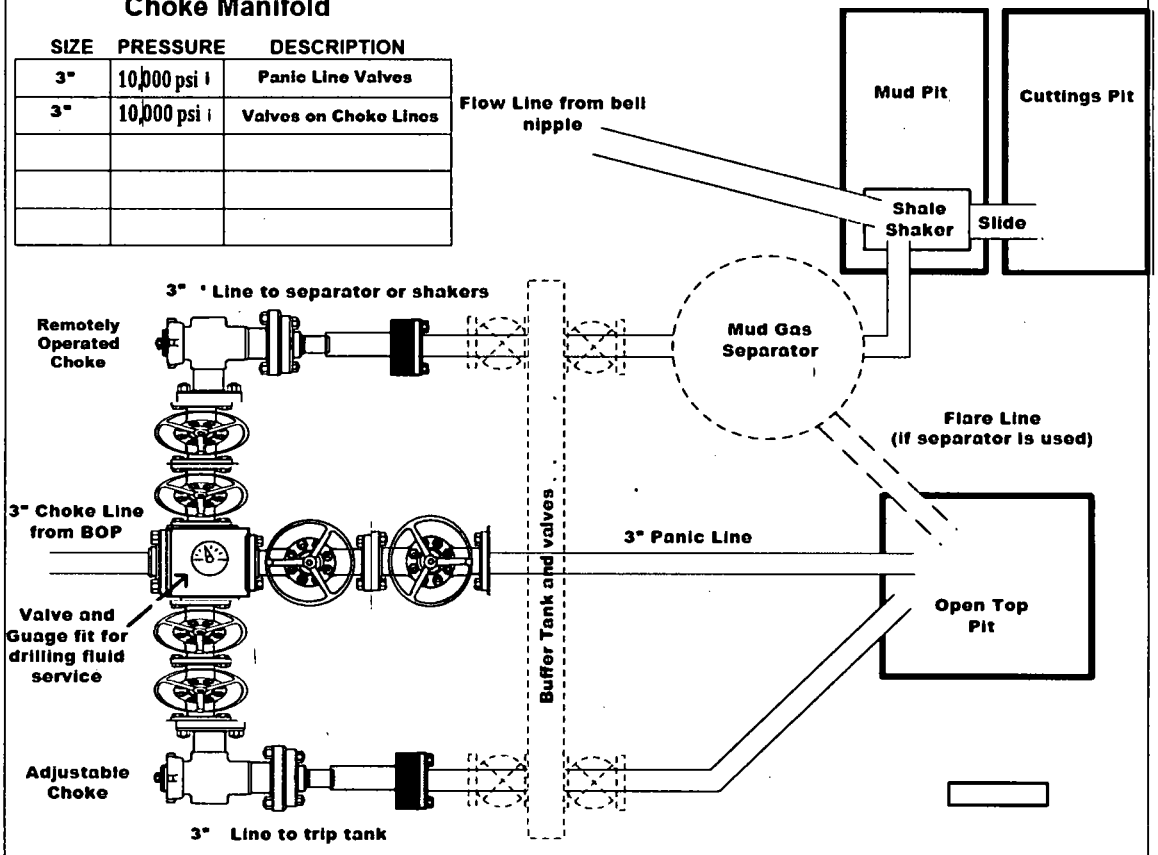
Minimum Requirements

OPERATION : Wolfcamp A wells

Minimum System Pressure Rating : 10,000 psi

Choke Manifold

SIZE	PRESSURE	DESCRIPTION
3"	10,000 psi	Panic Line Valves
3"	10,000 psi	Valves on Choke Lines



Installation Checklist

The following item must be verified and checked off prior to pressure testing of BOP equipment.

- ☐ **The installed BOP equipment meets at least the minimum requirements (rating, type, size, configuration) as shown on this schematic. Components may be substituted for equivalent equipment rated to higher pressures. Additional components may be put into place as long as they meet or exceed the minimum pressure rating of the system.**
- ☐ **Adjustable Chokes may be Remotely Operated but will have backup hand pump for hydraulic actuation in case of loss of rig air pressure or power.**
- ☐ **Flare and Panic lines will terminate a minimum of 150' from the wellhead. These lines will terminate at a location as per approved APD.**
- ☐ **The choke line, kill line, and choke manifold lines will be straight unless turns use tee blocks or are targeted with running tess, and will be anchored to prevent whip and reduce vibration. This excludes the line between mud gas separator and shale shaker.**
- ☐ **All valves (except chokes) on choke line, kill line, and choke manifold will be full opening and will allow straight through flow. This excludes any valves between mud gas separator and shale shakers.**
- ☐ **All manual valves will have hand wheels installed.**
- ☐ **If used, flare system will have effective method for ignition**
- ☐ **All connections will be flanged, welded, or clamped (no threaded connections like hammer unions)**
- ☐ **If buffer tank is used, a valve will be used on all lines at any entry or exit point to or from the buffer tank.**

After Installation Checklist is complete, fill out the information below and email to Superintendent and Drilling Engineer

Wellname: _____

Representative: _____

Date: _____

Diagram B

10M BLOWOUT PREVENTER SCHEMATIC

Minimum Requirements

OPERATION: Wolfcamp Wells in Salado Draw

Minimum System Pressure Rating: 10,000 PSI

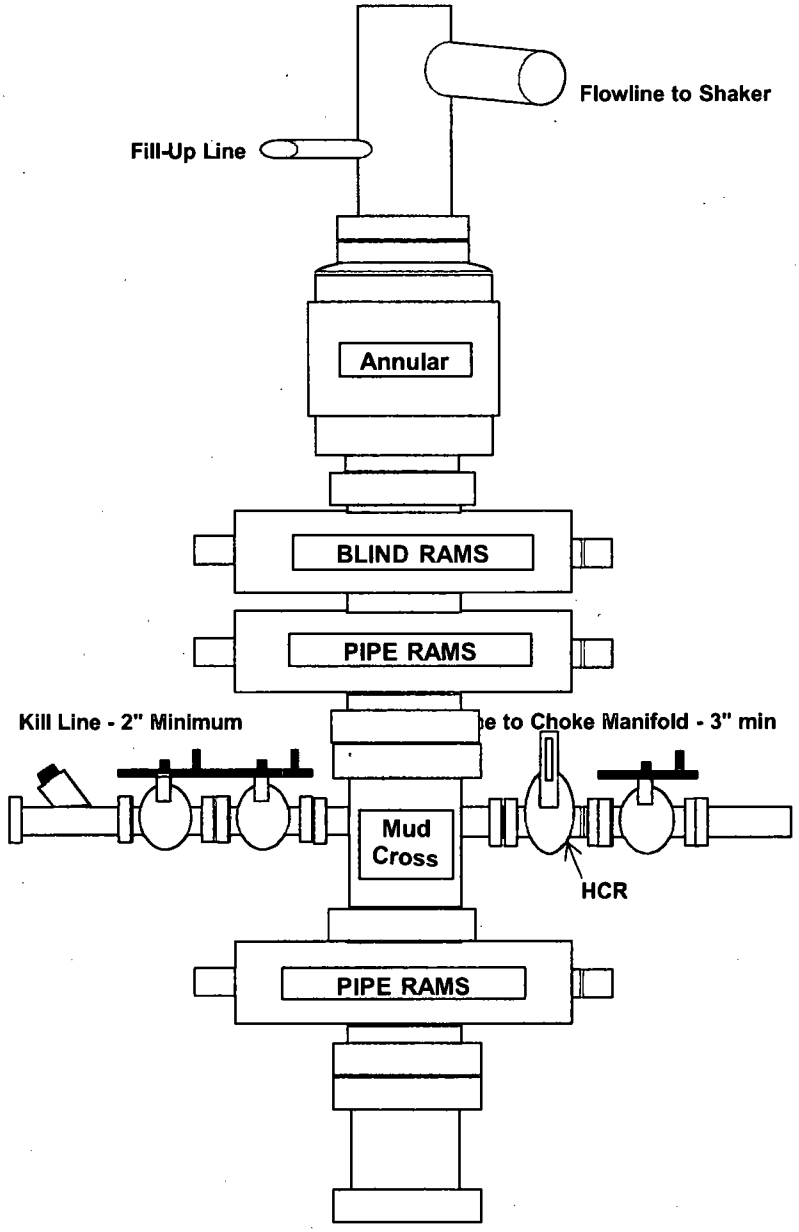


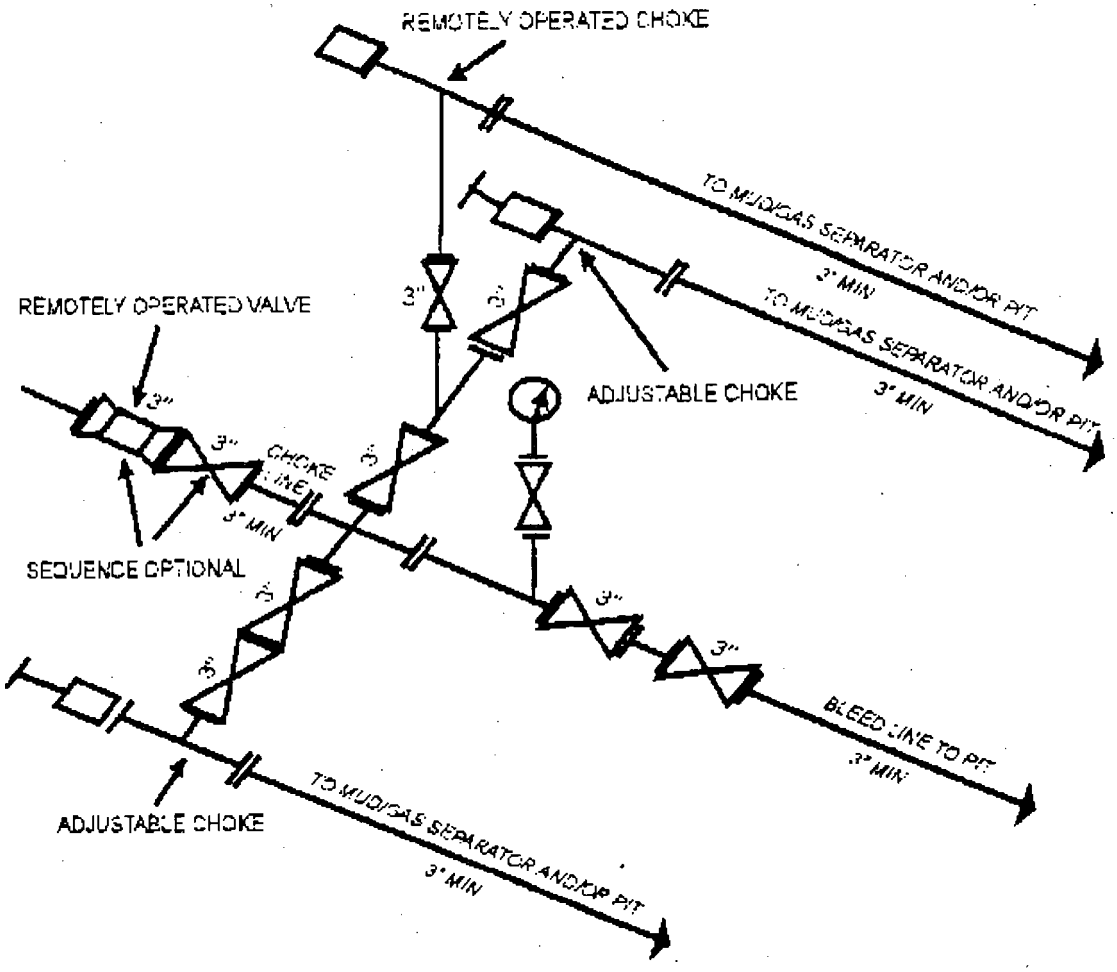
Diagram C

10M Choke Manifold SCHEMATIC

Minimum Requirements

OPERATION: Production and Open Hole Sections

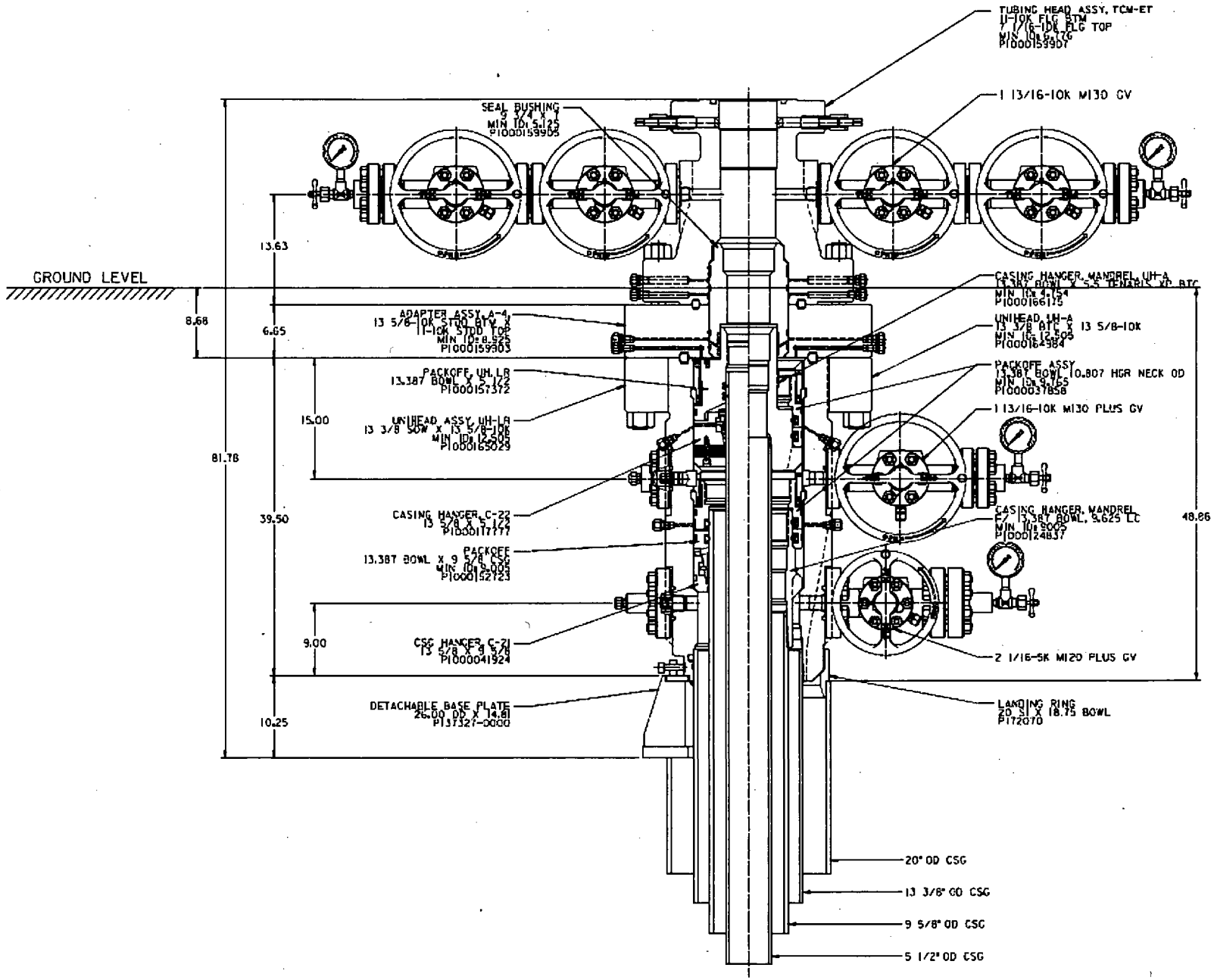
Minimum System Pressure Rating: 10,000 PSI



10M AND 15M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

[53 FR 49661, Dec. 9, 1988 and 54 FR 39528, Sept. 27, 1989]

Diagram D


TUBING HEAD ASSY, TCM-ET
U-10K FLG BTM
7 1/16-10K FLG TOP
MIN ID 6.720
P1000159901
SEAL BUSHING
9 3/4 X 7
MIN ID 5.125
P1000159905
1 13/16-10K M130 GV
GROUND LEVEL
13.63
8.68
6.65
ADAPTER ASSY A-4,
13 5/8-10K STUD BTM X
11-10K STUD TOP
MIN ID 8.625
P1000159903
CASING HANGER MANDREL UH-A
13.387 BOWL X 5.5 TENARIS YD BTC
MIN ID 4.764
P1000166175
UNIHEAD UH-A
13 3/8 BTC X 13 5/8-10K
MIN ID 12.505
P1000164984
PACKOFF ASSY
13.387 BOWL X 10.807 HGR NECK OD
MIN ID 9.765
P1000037858
PACKOFF, UH, LR
13.387 BOWL X 5.172
P1000157372
15.00
UNIHEAD ASSY, UH-LR
13 3/8 SOW X 13 5/8-10K
MIN ID 12.505
P1000163029
1 13/16-10K M130 PLUS GV
81.78
39.50
CASING HANGER, C-22
13 5/8 X 9 5/8
P1000177177
CASING HANGER, MANDREL
F/ 13.387 BOWL, 9.625 LC
MIN ID 8.905
P1000124837
48.86
PACKOFF
13.387 BOWL X 9 5/8 CSG
MIN ID 8.906
P1000152123
9.00
CSG HANGER C-21
13 5/8 X 9 5/8
P1000041924
2 1/16-5K M120 PLUS GV
DETACHABLE BASE PLATE
26.00 OD X 14.81
P137327-0000
10.25
LANDING RING
20 S1 X 18.75 BOWL
P172070
20" OD CSG
13 3/8" OD CSG
9 5/8" OD CSG
5 1/2" OD CSG

For the latest performance data, always visit our website: www.tenaris.com

June 17 2015

TenarisHydril

Size: 5.000 in.
Wall: 0.362 in.
Weight: 18.00 lbs/ft
Grade: P110-IC
Min. Wall Thickness: 87.5 %

Connection: Wedge 521™
Casing/Tubing: CAS

PIPE BODY DATA

GEOMETRY

Nominal OD	**5.000** in.	Nominal Weight	**18.00** lbs/ft	Standard Drift Diameter	**4.151** in.
Nominal ID	**4.276** in.	Wall Thickness	**0.362** in.	Special Drift Diameter	**N/A**
Plain End Weight	**17.95** lbs/ft				

PERFORMANCE

Body Yield Strength	**580** x 1000 lbs	Internal Yield	**13940** psi	SMYS	**110000** psi
Collapse	**14840** psi				

WEDGE 521™ CONNECTION DATA

GEOMETRY

Connection OD	**5.359** in.	Connection ID	**4.226** in.	Make-Up Loss	**3.620** in.
Critical Section Area	**3.891** sq. in.	Threads per in.	**3.36**		

PERFORMANCE

Tension Efficiency	**73.8** %	Joint Yield Strength	**428** x 1000 lbs	Internal Pressure Capacity	**13940** psi
Compression Strength	**514** x 1000 lbs	Compression Efficiency	**88.7** %	Bending	**75** °/100 ft
External Pressure Capacity	**14840** psi				

MAKE-UP TORQUES

Minimum	**6100** ft-lbs	Optimum	**7300** ft-lbs	Maximum (*)	**10700** ft-lbs

OPERATIONAL LIMIT TORQUES

Operating Torque	**17300** ft-lbs	Yield Torque	**26000** ft-lbs		

BLANKING DIMENSIONS

TenarisHydril

Data Sheet

TH DS-16.0372 23 August 2016
Rev 00

5.000" 18.00 lb/ft P110-ICY TenarisHydril Wedge 521®

PIPE BODY DATA					
GEOMETRY					
Nominal OD	5.000 in.	**Nominal Weight**	18.00 lbs/ft	**Standard Drift Diameter**	4.151 in.
Nominal ID	4.276 in.	**Wall Thickness**	0.362 in.	**Special Drift Diameter**	N/A
Plain End Weight	17.95 lbs/ft				
PERFORMANCE					
Body Yield Strength	659 x 1000 lbs	**Internal Yield**[1]	16290 psi	**Collapse**	14840 psi

CONNECTION DATA					
GEOMETRY					
Box OD (Turned)	5.359 in.	**Pin ID (Bored)**	4.226 in.	**Make-Up Loss**	3.62 in.
Critical Section Area	3.891 sq. in.	**Threads per in.**	3.36		
PERFORMANCE					
Tension Efficiency	73.8 %	**Joint Yield Strength**	486 x 1000 lbs	**Internal Yield**[1]	16290 psi
Compression Efficiency	88.7 %	**Compression Rating**	585 x 1000 lbs	**Collapse**	14840 psi
Bending	85°/100 ft				
MAKE-UP TORQUES					
Minimum	6100 ft-lbs	**Optimum**	7300 ft-lbs	**Maximum***	10700 ft-lbs
OPERATIONAL LIMIT TORQUES					
Operational	20000 ft-lbs			**Yield Torque**	30000 ft-lbs

*If you need to use torque values that are higher than the maximum indicated, please contact a local Tenaris technical sales representative

1. Internal Yield Rating is based on 90% RBW.

Blanking Dimensions

* If you need to use torque values that are higher than the maximum indicated, please contact a local Tenaris technical sales representative.

Tenaris

Data Sheet

TH DS-16.0370 11 ago 16
Rev 00

5" 18.00 ppf P110-ICY - TenarisXP® BTC (min wt 90%) (USC Units)

PIPE BODY DATA					
GEOMETRY					
Nominal OD	5.000 in.	**Nominal Weight**	18.00 lbs/ft	**Standard Drift Diameter**	4.151 in.
Nominal ID	4.276 in.	**Wall Thickness**	0.362 in.	**Special Drift Diameter**	-
Plain End Weight	17.95 lbs/ft				
PERFORMANCE					
Body Yield Strength	659 x 1000 lbs	**Internal Yield** [4]	16290 psi	**Collapse**	14840 psi

CONNECTION DATA					
Regular OD	5.720 in.	**Coupling Length**	9.325 in.	**Connection ID**	4.264 in.
Critical Section Area	5.275 sq. in.	**Threads per in.**	5	**Make-Up Loss**	4.141 in.
PERFORMANCE					
Tension Efficiency	100.0 %	**Joint Yield Strength**	659 x 1000 lbs	**Internal Pressure Capacity** [1] [4]	16290 psi
Structural Compression Efficiency	100.0 %	**Structural Compression Rating**	659 x 1000 lbs	**External Pressure Capacity**	14840 psi
Structural Bending [2]	115°/100 ft				
MAKE-UP TORQUES [3]					
Minimum	11480 ft-lbs	**Target**	12750 ft-lbs	**Maximum**	14030 ft-lbs
Operating Torque	15800 ft-lbs	**Yield Torque**	17700 ft-lbs		

(1) Internal Yield pressure related to structural resistance only. Internal pressure leak resistance as per section 10.3 API 5C3 / ISO 10400 - 2007.

(2) Structural rating, pure bending to yield (i.e no other loads applied)

(3) Torque values calculated for API Modified thread compounds with Friction Factor=1. For other thread compounds please contact us at licensees@oilfield.tenaris.com.

(4) Minimum wall thickness 90% of nominal

1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA TVD	KBTVD	MD
Rustler		800	
Castile		3480	
Lamar		4900	
Bell Canyon		4930	
Cherry Canyon		5970	
Brushy Canyon		7620	
Bone Spring Limestone		9090	
Upr. Avalon		9120	
Top Bone Spring 1		10040	
Top Bone Spring 2		10700	
Top Bone Spring 3		11740	
Wolfcamp		12140	
Wolfcamp A1		12193	
Wolfcamp A2		12,523	
Lateral TD (Wolfcamp A2)		12,523	23000

2. ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING FORMATIONS

The estimated depths at which the top and bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation	Depth
Deepest Expected Base of Fresh Water		700
Water	Rustler	800
Water	Bell Canyon	4930
Water	Cherry Canyon	5970
Oil/Gas	Brushy Canyon	7620
Oil/Gas	Bone Spring Limestone	9090
Oil/Gas	Upr. Avalon	9120
Oil/Gas	Top Bone Spring 1	10040
Oil/Gas	Top Bone Spring 2	10700
Oil/Gas	Top Bone Spring 3	11740
Oil/Gas	Wolfcamp	12140
Oil/Gas	Wolfcamp A1	12193
Oil/Gas	Wolfcamp A2	12,523

All shows of fresh water and minerals will be reported and protected.

3. BOP EQUIPMENT

Will have a minimum of a 10000 psi rig stack (see proposed schematic) for drill out below surface (Wolfcamp is not exposed until drillout of the intermediate casing). Could possibly utilize the 5000 psi rig stack (see proposed schematic) for drill out below surface casing due to the availabity of 10 M annular. (Wolfcamp is not exposed until drillout of the intermediate casing) Stack will be tested as specified in the attached testing requirements. Batch drilling of the surface, intermediate, and production will take place. A full BOP test will be performed unless approval from BLM is received otherwise. Flex choke hose will be used for all wells on the pad (see attached specs) BOP test will be conducted by a third party.

Chevron requests a variance to use a FMC UH2 Multibowl wellhead, which will be run through the rig foor on surface casing. BOPE will be nippled up and tested after cementing surface casing. Subsequent tests will be performed as needed, not to exceed 30 days. The field report from FMC and BOP test information will be provided in a subsequent report at the end of the well. Please see the attached wellhead schematic. An installation manual has been placed on file with the BLM office and remains unchanged from previous submittal.

4. **CASING PROGRAM**

a. The proposed casing program will be as follows:

Purpose	From	To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	800'	17-1/2"	13-3/8"	55 #	J55	STC	New
Intermediate	0'	11,500'	12-1/4"	9-5/8"	43.5#	HCK-L80	LTC	New
Liner	10,850'	12,300'	8-1/2"	7-5/8"	29.7 #	HCP-110	H513	New
Production (Taper String)	0'	12,500'	6-3/4"	5.5"	20#	P-110-ICY	TXP BTC	New
	12,500'	23,000'	6-3/4"	5"	18#	P-110 IC	TSH521	New

b. Casing design subject to revision based on geologic conditions encountered.

c. *****A "Worst Case" casing design for wells in a particular area is used below to calculate the Casing Safety Factors. If for any reason the casing design for a particular well requires setting casing deeper than the following "worst case" design, then the Casing Safety Factors will be recalcuated & sent to the BLM prior to drilling.**

d. **Chevron will fill casing at a minimum of every 20 jts (840') while running for intermediate and production casing in order to maintain collapse SF.**

SF Calculations based on the following "Worst Case" casing design:

Surface Casing: 850'
Intermediate Casing: 11,200' TVD
Production Casing: 23,000' MD/12,750' TVD (10,300' VS @ 90 deg inc)

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension	Min SF Tri-Axial
Surface	1.36	3.12	3.17	1.70
Intermediate	1.12	1.44	1.93	1.37
Liner	1.69	5.36	2.50	2.09
Production	1.11	1.23	1.97	1.37

Min SF is the smallest of a group of safety factors that include the following considerations:

Burst Design	Surf	Int	Liner	Prod
Pressure Test- Surface, Int, Prod Csg P external: Water P internal: Test psi + next section heaviest mud in csg	X	X	X	X
Displace to Gas- Surf Csg P external: Water P internal: Dry Gas from Next Csg Point	X			
Frac at Shoe, Gas to Surf- Int Csg P external: Water P internal: Dry Gas, 16 ppg Frac Gradient		X	X	
Stimulation (Frac) Pressures- Prod Csg P external: Water P internal: Max inj pressure w/ heaviest injected fluid				X
Tubing leak- Prod Csg (packer at KOP) P external: Water P internal: Leak just below surf, 8.7 ppg packer fluid				X
Collapse Design				
Full Evacuation P external: Water gradient in cement, mud above TOC P internal: none	X	X	X	X
Cementing- Surf, Int, Prod Csg P external: Wet cement P internal: water	X	X	X	X
Tension Design				
100k lb overpull	X	X	X	X

5. **CEMENTING PROGRAM**

Slurry	Type	Top	Bottom	Weight	Yield	%Excess	Sacks	Water
Surface				(ppg)	(sx/cu ft)	Open Hole		gal/sk
Tail	Class C	0'	800'	14.8	1.33	50	650	6.57
Intermediate								
Stage 2 Lead	Class C	0'	4570	11.9	2.39	100	1070	13.46
Stage 2 Tail	Class C	4570	4870	14.8	1.33	25	89	6.35
Stage 1 Lead	50:50 Poz Class C	4,870'	10,650'	11.9	2.21	25	1024	12.18
Stage 1 Tail	Class H	10,650'	11,150'	15.6	1.22	25	184	5.37
Liner								
Tail	Class H	10,850'	12,300'	15.6	1.22	17	123	5.34
Production								
Tail	Acid Soluble	10,350'	23,000'	15.6	1.2	10	1300	5.05

1. Final cement volumes will be determined by caliper.
2. Surface casing shall have at least one centralizer installed on each of the bottom three joints starting with the shoe joint.
3. Production casing will have one horizontal type centralizer on every joint for the first 1000' from TD, then every other joint to EOB, and then every third joint to KOP. Bowspring type centralizers will be run from KOP to intermediate casing.

6. **MUD PROGRAM**

From	To	Type	Weight	F. Vis	Filtrate
0'	800'	Spud Mud	8.3 - 8.7	32 - 34	NC - NC
800'	11,150'	Oil Based Mud	8.7-9.2	28 - 30	25-30
11,150'	12,300'	Oil Based Mud	9.5-13.5	70 - 75	25 - 30
12,300'	23,000'	Oil Based Mud	12.0-15.0	70 - 75	25 - 30

A closed system will by utilized consisting of above ground steel tanks. All wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in an approved sanitary landfill. Sanitary wastes will be contained in a chemical porta-toilet and then hauled to an approved sanitary landfill.

All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume. When abnormal pressures are anticipated -- a pit volume totalizer (PVT), stroke counter, and flow sensor will be used to detect volume changes indicating loss or gain of circulating fluid volume.

A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost circulation as hole conditions dictate.

7. **TESTING, LOGGING, AND CORING**

The anticipated type and amount of testing, logging, and coring are as follows:

a. Drill stem tests are not planned.
b. The logging program will be as follows:

TYPE	Logs	Interval	Timing	Vendor
Mudlogs	2 man mudlog	Int Csg to TD	Drillout of Int Csg	TBD
LWD	MWD Gamma	Int. and Prod. Hole	While Drilling	TBD

c. Conventional whole core samples are not planned.
d. A Directional Survey will be run.

8. **ABNORMAL PRESSURES AND HYDROGEN SULFIDE**

a. No abnormal pressures or temperatures are expected. Estimated BHP at intermediate TD is: 5750 psi
No abnormal pressures or temperatures are expected. Estimated BHP at production TD is: 9830 psi
b. Hydrogen sulfide gas is not anticipated. An H2S Contingency plan is attached with this APD in the event that H2S is encountered

1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA TVD	KBTVD	MD
Rustler		800	
Castile		3480	
Lamar		4900	
Bell Canyon		4930	
Cherry Canyon		5970	
Brushy Canyon		7620	
Bone Spring Limestone		9090	
Upr. Avalon		9120	
Top Bone Spring 1		10040	
Top Bone Spring 2		10700	
Top Bone Spring 3		11740	
Wolfcamp		12140	
Wolfcamp A1		12193	
Wolfcamp A2		12,523	
Lateral TD (Wolfcamp A2)		12,523	23000

2. ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING FORMATIONS

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Oil/Gas	Top Bone Spring 2	10700
Oil/Gas	Top Bone Spring 3	11740
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Oil/Gas	Wolfcamp A2	12,523

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Purpose	From	To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	800'	17-1/2"	13-3/8"	55 #	J55	STC	New
Intermediate	0'	11,500'	12-1/4"	9-5/8"	43.5#	HCK-L80	LTC	New
Liner	10,850'	12,300'	8-1/2"	7-5/8"	29.7 #	HCP-110	H513	New
Production (Taper String)	0'	12,500'	6-3/4"	5.5"	20#	P-110-ICY	TXP BTC	New
	12,500'	23,000'	6-3/4"	5"	18#	P-110 IC	TSH521	New

b. Casing design subject to revision based on geologic conditions encountered.

c. *****A "Worst Case" casing design for wells in a particular area is used below to calculate the Casing Safety Factors. If for any reason the casing design for a particular well requires setting casing deeper than the following "worst case" design, then the Casing Safety Factors will be recalcuated & sent to the BLM prior to drilling.**

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Casing String	Min SF Burst	Min SF Collapse	Min SF Tension	Min SF Tri-Axial
Surface	1.36	3.12	3.17	1.70
Intermediate	1.12	1.44	1.93	1.37
Liner	1.69	5.36	2.50	2.09
Production	1.11	1.23	1.97	1.37

Min SF is the smallest of a group of safety factors that include the following considerations:

	Surf	Int	Liner	Prod
Burst Design				
Pressure Test- Surface, Int, Prod Csg P external: Water P internal: Test psi + next section heaviest mud in csg	X	X	X	X
Displace to Gas- Surf Csg P external: Water P internal: Dry Gas from Next Csg Point	X			
Frac at Shoe, Gas to Surf- Int Csg P external: Water P internal: Dry Gas, 16 ppg Frac Gradient		X	X	
Stimulation (Frac) Pressures- Prod Csg P external: Water P internal: Max inj pressure w/ heaviest injected fluid				X
Tubing leak- Prod Csg (packer at KOP) P external: Water P internal: Leak just below surf, 8.7 ppg packer fluid				X
Collapse Design				
Full Evacuation P external: Water gradient in cement, mud above TOC P internal: none	X	X	X	X
Cementing- Surf, Int, Prod Csg P external: Wet cement P internal: water	X	X	X	X
Tension Design				
100k lb overpull	X	X	X	X

5. **CEMENTING PROGRAM**

Slurry	Type	Top	Bottom	Weight	Yield	%Excess	Sacks	Water
Surface				(ppg)	(sx/cu ft)	Open Hole		gal/sk
Tail	Class C	0'	800'	14.8	1.33	50	650	6.57
Intermediate								
Stage 2 Lead	Class C	0'	4570	11.9	2.39	100	1070	13.46
Stage 2 Tail	Class C	4570	4870	14.8	1.33	25	89	6.35
Stage 1 Lead	50:50 Poz Class C	4,870'	10,650'	11.9	2.21	25	1024	12.18
Stage 1 Tail	Class H	10,650'	11,150'	15.6	1.22	25	184	5.37
Liner								
Tail	Class H	10,850'	12,300'	15.6	1.22	17	123	5.34
Production								
Tail	Acid Soluble	10,350'	23,000'	15.6	1.2	10	1300	5.05

1. Final cement volumes will be determined by caliper.
2. Surface casing shall have at least one centralizer installed on each of the bottom three joints starting with the shoe joint.
3. Production casing will have one horizontal type centralizer on every joint for the first 1000' from TD, then every other joint to EOB, and then every third joint to KOP. Bowspring type centralizers will be run from KOP to intermediate casing.

6. MUD PROGRAM

From	To	Type	Weight	F. Vis	Filtrate
0'	800'	Spud Mud	8.3 - 8.7	32 - 34	NC - NC
800'	11,150'	Oil Based Mud	8.7-9.2	28 - 30	25-30
11,150'	12,300'	Oil Based Mud	9.5-13.5	70 - 75	25 - 30
12,300'	23,000'	Oil Based Mud	12.0-15.0	70 - 75	25 - 30

A closed system will by utilized consisting of above ground steel tanks. All wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in an approved sanitary landfill. Sanitary wastes will be contained in a chemical porta-toilet and then hauled to an approved sanitary landfill.

All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume. When abnormal pressures are anticipated -- a pit volume totalizer (PVT), stroke counter, and flow sensor will be used to detect volume changes indicating loss or gain of circulating fluid volume.

A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost circulation as hole conditions dictate.

7. TESTING, LOGGING, AND CORING

The anticipated type and amount of testing, logging, and coring are as follows:

a. Drill stem tests are not planned.
b. The logging program will be as follows:

TYPE	Logs	Interval	Timing	Vendor
Mudlogs	2 man mudlog	Int Csg to TD	Drillout of Int Csg	TBD
LWD	MWD Gamma	Int. and Prod. Hole	While Drilling	TBD

c. Conventional whole core samples are not planned.
d. A Directional Survey will be run.

8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

a. No abnormal pressures or temperatures are expected. Estimated BHP at intermediate TD is: 5750 psi
No abnormal pressures or temperatures are expected. Estimated BHP at production TD is: 9830 psi
b. Hydrogen sulfide gas is not anticipated. An H2S Contingency plan is attached with this APD in the event that H2S is encountered

1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA TVD	KBTVD	MD
Rustler		800	
Castile		3480	
Lamar		4900	
Bell Canyon		4930	
Cherry Canyon		5970	
Brushy Canyon		7620	
Bone Spring Limestone		9090	
Upr. Avalon		9120	
Top Bone Spring 1		10040	
Top Bone Spring 2		10700	
Top Bone Spring 3		11740	
Wolfcamp		12140	
Wolfcamp A1		12193	
Wolfcamp A2		12,523	
Lateral TD (Wolfcamp A2)		12,523	23000

2. ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING FORMATIONS

The estimated depths at which the top and bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation	Depth
Deepest Expected Base of Fresh Water		700
Water	Rustler	800
Water	Bell Canyon	4930
Water	Cherry Canyon	5970
Oil/Gas	Brushy Canyon	7620
Oil/Gas	Bone Spring Limestone	9090
Oil/Gas	Upr. Avalon	9120
Oil/Gas	Top Bone Spring 1	10040
Oil/Gas	Top Bone Spring 2	10700
Oil/Gas	Top Bone Spring 3	11740
Oil/Gas	Wolfcamp	12140
Oil/Gas	Wolfcamp A1	12193
Oil/Gas	Wolfcamp A2	12,523

All shows of fresh water and minerals will be reported and protected.

3. BOP EQUIPMENT

Will have a minimum of a 10000 psi rig stack (see proposed schematic) for drill out below surface (Wolfcamp is not exposed until drillout of the intermediate casing). Could possibly utilize the 5000 psi rig stack (see proposed schematic) for drill out below surface casing due to the availabity of 10 M annular. (Wolfcamp is not exposed until drillout of the intermediate casing) Stack will be tested as specified in the attached testing requirements. Batch drilling of the surface, intermediate, and production will take place. A full BOP test will be performed unless approval from BLM is received otherwise. Flex choke hose will be used for all wells on the pad (see attached specs) BOP test will be conducted by a third party.

Chevron requests a variance to use a FMC UH2 Multibowl wellhead, which will be run through the rig foor on surface casing. BOPE will be nippled up and tested after cementing surface casing. Subsequent tests will be performed as needed, not to exceed 30 days. The field report from FMC and BOP test information will be provided in a subsequent report at the end of the well. Please see the attached wellhead schematic. An installation manual has been placed on file with the BLM office and remains unchanged from previous submittal.

4. **CASING PROGRAM**

a. The proposed casing program will be as follows:

Purpose	From	To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	800'	17-1/2"	13-3/8"	55 #	J55	STC	New
Intermediate	0'	11,500'	12-1/4"	9-5/8"	43.5#	HCK-L80	LTC	New
Liner	10,850'	12,300'	8-1/2"	7-5/8"	29.7 #	HCP-110	H513	New
Production (Taper String)	0'	12,500'	6-3/4"	5.5"	20#	P-110-ICY	TXP BTC	New
	12,500'	23,000'	6-3/4"	5"	18#	P-110 IC	TSH521	New

b. Casing design subject to revision based on geologic conditions encountered.

c. *****A "Worst Case" casing design for wells in a particular area is used below to calculate the Casing Safety Factors. If for any reason the casing design for a particular well requires setting casing deeper than the following "worst case" design, then the Casing Safety Factors will be recalcuated & sent to the BLM prior to drilling.**

d. **Chevron will fill casing at a minimum of every 20 jts (840') while running for intermediate and production casing in order to maintain collapse SF.**

SF Calculations based on the following "Worst Case" casing design:

Surface Casing: 850'
Intermediate Casing: 11,200' TVD
Production Casing: 23,000' MD/12,750' TVD (10,300' VS @ 90 deg inc)

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension	Min SF Tri-Axial
Surface	1.36	3.12	3.17	1.70
Intermediate	1.12	1.44	1.93	1.37
Liner	1.69	5.36	2.50	2.09
Production	1.11	1.23	1.97	1.37

Min SF is the smallest of a group of safety factors that include the following considerations:

	Surf	Int	Liner	Prod
Burst Design				
Pressure Test- Surface, Int, Prod Csg P external: Water P internal: Test psi + next section heaviest mud in csg	X	X	X	X
Displace to Gas- Surf Csg P external: Water P internal: Dry Gas from Next Csg Point	X			
Frac at Shoe, Gas to Surf- Int Csg P external: Water P internal: Dry Gas, 16 ppg Frac Gradient		X	X	
Stimulation (Frac) Pressures- Prod Csg P external: Water P internal: Max inj pressure w/ heaviest injected fluid				X
Tubing leak- Prod Csg (packer at KOP) P external: Water P internal: Leak just below surf, 8.7 ppg packer fluid				X
Collapse Design				
Full Evacuation P external: Water gradient in cement, mud above TOC P internal: none	X	X	X	X
Cementing- Surf, Int, Prod Csg P external: Wet cement P internal: water	X	X	X	X
Tension Design				
100k lb overpull	X	X	X	X

5. **CEMENTING PROGRAM**

Slurry	Type	Top	Bottom	Weight	Yield	%Excess	Sacks	Water
Surface				(ppg)	(sx/cu ft)	Open Hole		gal/sk
Tail	Class C	0'	800'	14.8	1.33	50	650	6.57
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Wed Jun 17 2015

Tenaris

Casing and Tubing Performance Dat

PIPE BODY DATA

GEOMETRY

Outside Diameter	**9.625 in**	Wall Thickness	**0.435 in**	API Drift Diameter	**8.599 in**
Nominal Weight	**43.50 lbs/ft**	Nominal ID	**8.755 in**	Alternative Drift Diameter	**8.625 in**
Plain End Weight	**42.73 lbs/ft**	Nominal cross section	**12.559 in**		

PERFORMANCE

Steel Grade	**L80**	Minimum Yield	**80,000 psi**	Minimum Ultimate	**95,000 psi**
Tension Yield	**1,005,000 in**	Internal Pressure Yield	**6,330 psi**	Collapse Pressure	**3,810 psi**
Available Seamless	**Yes**	Available Welded	**No**		

CONNECTION DATA

TYPE: LTC

GEOMETRY

Coupling Reg OD	**10.625 in**	Threads per in	**8**	Thread turns make up	**3.5**

PERFORMANCE

Steel Grade	**L80**	Coupling Min Yield	**80,000 psi**	Coupling Min Ultimate	**95,000 psi**
Joint Strength	**813,000 lbs**			Internal Pressure Resistance	**6,330 psi**

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Frac at Shoe, Gas to Surf- Int Csg P external: Water P internal: Dry Gas, 16 ppg Frac Gradient		X	X	
Stimulation (Frac) Pressures- Prod Csg P external: Water P internal: Max inj pressure w/ heaviest injected fluid				X
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5. **CEMENTING PROGRAM**

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For the latest performance data, always visit our website: www.tenaris.com

January 18 2016

Tenaris

Size: 5.500 in.
Wall: 0.361 in.
Weight: 20.00 lbs/ft
Grade: P110-ICY
Min. Wall Thickness: 87.5 %

Connection: TenarisXP® BTC
Casing/Tubing: CAS
Coupling Option: REGULAR

PIPE BODY DATA

GEOMETRY

Nominal OD	**5.500** in.	Nominal Weight	**20.00** lbs/ft	Standard Drift Diameter	**4.653** in.
Nominal ID	**4.778** in.	Wall Thickness	**0.361** in.	Special Drift Diameter	**N/A**
Plain End Weight	**19.83** lbs/ft				

PERFORMANCE

Body Yield Strength	**729** x 1000 lbs	Internal Yield	**14360** psi	SMYS	**125000** psi
Collapse	**12100** psi				

TENARISXP® BTC CONNECTION DATA

GEOMETRY

Connection OD	**6.100** in.	Coupling Length	**9.450** in.	Connection ID	**4.766** in.
Critical Section Area	**5.828** sq. in.	Threads per in.	**5.00**	Make-Up Loss	**4.204** in.

PERFORMANCE

Tension Efficiency	**100** %	Joint Yield Strength	**729** x 1000 lbs	Internal Pressure Capacity(1)	**14360** psi
Structural Compression Efficiency	**100** %	Structural Compression Strength	**729** x 1000 lbs	Structural Bending(2)	**104** °/100 ft
External Pressure Capacity	**12100** psi				

ESTIMATED MAKE-UP TORQUES(3)

Minimum	**11540** ft-lbs	Optimum	**12820** ft-lbs	Maximum	**14100** ft-lbs

OPERATIONAL LIMIT TORQUES

Operating Torque	**22700** ft-lbs	Yield Torque	**25250** ft-lbs		

BLANKING DIMENSIONS

Blanking Dimensions

(1) Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per section 10.3 API 5C3 / ISO 10400 - 2007.

(2) Structural rating, pure bending to yield (i.e no other loads applied)

(3) Torque values calculated for API Modified thread compounds with Friction Factor=1. For other thread compounds please contact us at licensees@oilfield.tenaris.com. Torque values may be further reviewed. For additional information, please contact us at contact-tenarishydril@tenaris.com

1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

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All shows of fresh water and minerals will be reported and protected.

3. BOP EQUIPMENT

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4. **CASING PROGRAM**

a. The proposed casing program will be as follows:

Purpose	From	To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	800'	17-1/2"	13-3/8"	55 #	J55	STC	New
Intermediate	0'	11,500'	12-1/4"	9-5/8"	43.5#	HCK-L80	LTC	New
Liner	10,850'	12,300'	8-1/2"	7-5/8"	29.7 #	HCP-110	H513	New
Production (Taper String)	0'	12,500'	6-3/4"	5.5"	20#	P-110-ICY	TXP BTC	New
	12,500'	23,000'	6-3/4"	5"	18#	P-110 IC	TSH521	New

b. Casing design subject to revision based on geologic conditions encountered.

c. *****A "Worst Case" casing design for wells in a particular area is used below to calculate the Casing Safety Factors. If for any reason the casing design for a particular well requires setting casing deeper than the following "worst case" design, then the Casing Safety Factors will be recalcuated & sent to the BLM prior to drilling.**

d. **Chevron will fill casing at a minimum of every 20 jts (840') while running for intermediate and production casing in order to maintain collapse SF.**

SF Calculations based on the following "Worst Case" casing design:

Surface Casing: 850'
Intermediate Casing: 11,200' TVD
Production Casing: 23,000' MD/12,750' TVD (10,300' VS @ 90 deg inc)

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension	Min SF Tri-Axial
Surface	1.36	3.12	3.17	1.70
Intermediate	1.12	1.44	1.93	1.37
Liner	1.69	5.36	2.50	2.09
Production	1.11	1.23	1.97	1.37

Min SF is the smallest of a group of safety factors that include the following considerations:

	Surf	Int	Liner	Prod
Burst Design				
Pressure Test- Surface, Int, Prod Csg P external: Water P internal: Test psi + next section heaviest mud in csg	X	X	X	X
Displace to Gas- Surf Csg P external: Water P internal: Dry Gas from Next Csg Point	X			
Frac at Shoe, Gas to Surf- Int Csg P external: Water P internal: Dry Gas, 16 ppg Frac Gradient		X	X	
Stimulation (Frac) Pressures- Prod Csg P external: Water P internal: Max inj pressure w/ heaviest injected fluid				X
Tubing leak- Prod Csg (packer at KOP) P external: Water P internal: Leak just below surf, 8.7 ppg packer fluid				X
Collapse Design				
Full Evacuation P external: Water gradient in cement, mud above TOC P internal: none	X	X	X	X
Cementing- Surf, Int, Prod Csg P external: Wet cement P internal: water	X	X	X	X
Tension Design				
100k lb overpull	X	X	X	X

5. **CEMENTING PROGRAM**

Slurry	Type	Top	Bottom	Weight	Yield	%Excess	Sacks	Water
Surface				(ppg)	(sx/cu ft)	Open Hole		gal/sk
Tail	Class C	0'	800'	14.8	1.33	50	650	6.57
Intermediate								
Stage 2 Lead	Class C	0'	4570	11.9	2.39	100	1070	13.46
Stage 2 Tail	Class C	4570	4870	14.8	1.33	25	89	6.35
Stage 1 Lead	50:50 Poz Class C	4,870'	10,650'	11.9	2.21	25	1024	12.18
Stage 1 Tail	Class H	10,650'	11,150'	15.6	1.22	25	184	5.37
Liner								
Tail	Class H	10,850'	12,300'	15.6	1.22	17	123	5.34
Production								
Tail	Acid Soluble	10,350'	23,000'	15.6	1.2	10	1300	5.05

1. Final cement volumes will be determined by caliper.
2. Surface casing shall have at least one centralizer installed on each of the bottom three joints starting with the shoe joint.
3. Production casing will have one horizontal type centralizer on every joint for the first 1000' from TD, then every other joint to EOB, and then every third joint to KOP. Bowspring type centralizers will be run from KOP to intermediate casing.

6. MUD PROGRAM

From	To	Type	Weight	F. Vis	Filtrate
0'	800'	Spud Mud	8.3 - 8.7	32 - 34	NC - NC
800'	11,150'	Oil Based Mud	8.7-9.2	28 - 30	25-30
11,150'	12,300'	Oil Based Mud	9.5-13.5	70 - 75	25 - 30
12,300'	23,000'	Oil Based Mud	12.0-15.0	70 - 75	25 - 30

A closed system will by utilized consisting of above ground steel tanks. All wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in an approved sanitary landfill. Sanitary wastes will be contained in a chemical porta-toilet and then hauled to an approved sanitary landfill.

All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume. When abnormal pressures are anticipated -- a pit volume totalizer (PVT), stroke counter, and flow sensor will be used to detect volume changes indicating loss or gain of circulating fluid volume.

A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost circulation as hole conditions dictate.

7. TESTING, LOGGING, AND CORING

The anticipated type and amount of testing, logging, and coring are as follows:

a. Drill stem tests are not planned.
b. The logging program will be as follows:

TYPE	Logs	Interval	Timing	Vendor
Mudlogs	2 man mudlog	Int Csg to TD	Drillout of Int Csg	TBD
LWD	MWD Gamma	Int. and Prod. Hole	While Drilling	TBD

c. Conventional whole core samples are not planned.
d. A Directional Survey will be run.

8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

a. No abnormal pressures or temperatures are expected. Estimated BHP at intermediate TD is: 5750 psi
No abnormal pressures or temperatures are expected. Estimated BHP at production TD is: 9830 psi
b. Hydrogen sulfide gas is not anticipated. An H2S Contingency plan is attached with this APD in the event that H2S is encountered

For the latest performance data, always visit our website: www.tenaris.com

June 17 2015

TenarisHydril

Size: 7.625 in.
Wall: 0.375 in.
Weight: 29.70 lbs/ft
Grade: P110-IC
Min. Wall Thickness: 87.5 %

Connection: Wedge 513™
Casing/Tubing: CAS

PIPE BODY DATA

GEOMETRY

Nominal OD	**7.625** in.	Nominal Weight	**29.70** lbs/ft	Standard Drift Diameter	**6.750** in.
Nominal ID	**6.875** in.	Wall Thickness	**0.375** in.	Special Drift Diameter	**N/A**
Plain End Weight	**29.06** lbs/ft				

PERFORMANCE

Body Yield Strength	**940** x 1000 lbs	Internal Yield	**9470** psi	SMYS	**110000** psi
Collapse	**7150** psi				

WEDGE 513™ CONNECTION DATA

GEOMETRY

Connection OD	**7.625** in.	Connection ID	**6.800** in.	Make-Up Loss	**4.420** in.
Critical Section Area	**5.125** sq. in.	Threads per in.	**3.29**		

PERFORMANCE

Tension Efficiency	**60.0** %	Joint Yield Strength	**564** x 1000 lbs	Internal Pressure Capacity	**9470** psi
Compression Strength	**707** x 1000 lbs	Compression Efficiency	**75.2** %	Bending	**40** °/100 ft
External Pressure Capacity	**7150** psi				

MAKE-UP TORQUES

Minimum	**9000** ft-lbs	Optimum	**10800** ft-lbs	Maximum (*)	**15800** ft-lbs

OPERATIONAL LIMIT TORQUES

Operating Torque	**47000** ft-lbs	Yield Torque	**70000** ft-lbs		

BLANKING DIMENSIONS

Blanking Dimensions

* If you need to use torque values that are higher than the maximum indicated, please contact a local Tenaris technical sales representative.

1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA TVD	KBTVD	MD
Rustler		800	
Castile		3480	
Lamar		4900	
Bell Canyon		4930	
Cherry Canyon		5970	
Brushy Canyon		7620	
Bone Spring Limestone		9090	
Upr. Avalon		9120	
Top Bone Spring 1		10040	
Top Bone Spring 2		10700	
Top Bone Spring 3		11740	
Wolfcamp		12140	
Wolfcamp A1		12193	
Wolfcamp A2		12,523	
Lateral TD (Wolfcamp A2)		12,523	23000

2. ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING FORMATIONS

The estimated depths at which the top and bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation	Depth
Deepest Expected Base of Fresh Water		700
Water	Rustler	800
Water	Bell Canyon	4930
Water	Cherry Canyon	5970
Oil/Gas	Brushy Canyon	7620
Oil/Gas	Bone Spring Limestone	9090
Oil/Gas	Upr. Avalon	9120
Oil/Gas	Top Bone Spring 1	10040
Oil/Gas	Top Bone Spring 2	10700
Oil/Gas	Top Bone Spring 3	11740
Oil/Gas	Wolfcamp	12140
Oil/Gas	Wolfcamp A1	12193
Oil/Gas	Wolfcamp A2	12,523

All shows of fresh water and minerals will be reported and protected.

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Displace to Gas- Surf Csg P external: Water P internal: Dry Gas from Next Csg Point	X			
Frac at Shoe, Gas to Surf- Int Csg P external: Water P internal: Dry Gas, 16 ppg Frac Gradient		X	X	
Stimulation (Frac) Pressures- Prod Csg P external: Water P internal: Max inj pressure w/ heaviest injected fluid				X
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APD ID: 10400015084 **Submission Date:** 07/12/2017

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

SD_EA_29_32_Fed_Com_P11_14H_Work_Area_Detail_07-12-2017.pdf
SD_EA_29_32_Fed_Com_P11_14H_Road_Plat_20170918094503.pdf

Existing Road Purpose: FLUID TRANSPORT **Row(s) Exist?** NO

ROW ID(s)

ID:

Do the existing roads need to be improved? YES

Existing Road Improvement Description: REPAIR POT HOLES, CLEAR DITCHES, REPAIR THE CROWN, ETC.

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

SD_EA_29_32_Fed_Com_P11_14H_Road_Plat_07-12-2017.pdf
SD_EA_29_32_Fed_Com_P11_14H_Well_Plat_20170918094653.pdf

New road type: LOCAL

Length: 34.37 Feet **Width (ft.):** 25

Max slope (%): 2 **Max grade (%):** 3

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 25

New road access erosion control: Erosion / Drainage: Drainage control system shall be constructed on the entire length of road by the use of any of the following: ditches, side hill out-sloping and in-sloping, lead-off ditches, culvert installation, or low water crossings.

New road access plan or profile prepared? NO

New road access plan attachment:

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

Access road engineering design? NO

Access road engineering design attachment:

Access surfacing type: NONE

Access topsoil source: ONSITE

Access surfacing type description:

Access onsite topsoil source depth: 0

Offsite topsoil source description:

Onsite topsoil removal process: none needed

Access other construction information: Enclosure fencing will be installed around open cellar to prevent livestock or large wildlife from being trapped after installation. Fencing will remain in place while no activity is present and until back-filling takes place.

Access miscellaneous information: No surface water concerns, Low Karst area with no caves or visual signs of caves found, the entire perimeter of the well pad wil be bermed to prevent oil, salt, and other chemical contaminates from leaving the well pad, no known water wells within the 1-mile radius, no dwellings within the immediate vicinity of the proposed location, well signs will be in compliance per federal and state requirements and specifications.

Number of access turnouts: **Access turnout map:**

Drainage Control

New road drainage crossing: CULVERT,OTHER

Drainage Control comments: Sediment traps (hay bales suggested by BLM) we don't use every time but keep handy.

Road Drainage Control Structures (DCS) description: Ditching will be constructed on both sides of road.

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Additional Attachment(s):

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

SD_EA_29_32_Fed_Com_Pad_11_14H_One_Mile_Radius_07-12-2017.pdf

Existing Wells description:

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: SEE SURFACE USE PLAN

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

Production Facilities map:

SD_EA_29_32_Fed_Com_P11_14H_Work_Area_Detail_07-12-2017.pdf
SD_EA_29_32_Fed_Com_P11_13H_16H_PrelimFlowlines_20170918094806.pdf
SD_EA_29_32_Fed_Com_P11_13H_16H_PrelimGas_Lift_Lines_20170918094821.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source use type: INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE CASING
Water source type: GW WELL
Describe type:
Source latitude:
Source longitude:
Source datum: NAD83
Water source permit type: PRIVATE CONTRACT
Source land ownership: FEDERAL
Water source transport method: PIPELINE
Source transportation land ownership: FEDERAL
Water source volume (barrels): 725000
Source volume (acre-feet): 93.447495
Source volume (gal): 30450000

Water source and transportation map:

SD_EA_29_32_Fed_Com_P11_14H_Work_Area_Detail_07-12-2017.pdf

Water source comments: EXISTING PONDS IN SEC 19,T26S-33E FOR FW & SEC 23 T26S-R33E & SEC 13 T26S-R33E FOR RECYCLED & BRACKISH WTR. FW FROM A PRIVATE WTR SOURCE.
New water well? NO

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**
Well target aquifer:
Est. depth to top of aquifer(ft): **Est thickness of aquifer:**
Aquifer comments:
Aquifer documentation:
Well depth (ft): **Well casing type:**
Well casing outside diameter (in.): **Well casing inside diameter (in.):**
New water well casing? **Used casing source:**
Drilling method: **Drill material:**
Grout material: **Grout depth:**
Casing length (ft.): **Casing top depth (ft.):**

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Construction Materials description: Caliche will be used to construct well pad and roads. Material will be purchased from the private land owners (Oliver Kiehne) caliche pit located in Sec. 27, T26S, R33E, Lea County, NM. and alternative @ N2 Sec 21, T26S, R33E, Lea County, NM. The proposed source of construction material will be located and purchased by Chevron USA Inc. Notification shall be given to BLM at 575-234-5909 at least 3 working days prior to commencing construction of access road and/or well pad.

Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: GARBAGE

Waste content description: Garbage and trash

Amount of waste: 200 barrels

Waste disposal frequency : Daily

Safe containment description: collected in a trash container properly contained and disposed of properly disposed of into steel tanks

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** STATE

Disposal type description:

Disposal location description: NMOCD approved disposal facility

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

Cuttings Area being used? NO

Are you storing cuttings on location? NO

Description of cuttings location

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

SD_EA_29_32_Fed_Com_P11_14H_Well_Plat_07-12-2017.pdf
SD_EA_2932_Fed_Com_P11_Rig_layout_07-12-2017.pdf
SD_EA_29_32_Fed_Com_P11_14H_Cut_Fill_07-12-2017.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** SD EA 29 32 FED COM P11

Multiple Well Pad Number: 13H 14H 15H 16H

Recontouring attachment:

SD_EA_29_32_Fed_Com_P11_Reclamation_07-12-2017.pdf
SD_EA_29_32_P11_14H_SUPO_07-12-2017.pdf

Drainage/Erosion control construction: Proper erosion control methods will be used on the area to control erosion, runoff, and siltation of the surrounding area.

Drainage/Erosion control reclamation: please refer to the attached APD SUP

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

Wellpad long term disturbance (acres): 4.32

Wellpad short term disturbance (acres): 2.5

Access road long term disturbance (acres): 0.02

Access road short term disturbance (acres): 0

Pipeline long term disturbance (acres): 0.0011983471

Pipeline short term disturbance (acres): 0

Other long term disturbance (acres): 0

Other short term disturbance (acres): 0

Total long term disturbance: 4.3411984

Total short term disturbance: 2.5

Reconstruction method: refer to the APD SUP attached.

Topsoil redistribution: refer to the APD SUP attached.

Soil treatment: After all the disturbed areas have been properly prepared the areas will be seeded with the proper BLM seed mixture, free of noxious weeds.

Existing Vegetation at the well pad: mesquite, shrubs, grass

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: mesquite, shrubs, grass

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: mesquite, shrubs, grass

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: mesquite, shrubs, grass

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: Mark **Last Name:** Woodard

Phone: **Email:** markwoodard@chevron.com

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: Treat with BLM seed mixture (BLM #2 free of noxious weeds.

Weed treatment plan attachment:

Monitoring plan description: the interim reclamation will be monitored periodically to ensure that vegetation has re-established.

Monitoring plan attachment:

Success standards: As per BLM requirements

Pit closure description: none

Pit closure attachment:

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

Section 11 - Surface Ownership

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: PIPELINE

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

Operator Name: CHEVRON USA INCORPORATED

Well Name: SD EA 29 32 FED COM P11 **Well Number:** 14H

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Section 12 - Other Information

Right of Way needed? YES **Use APD as ROW?** YES

ROW Type(s): 288100 ROW – O&G Pipeline

ROW Applications

SUPO Additional Information:

Use a previously conducted onsite? YES

Previous Onsite information: ON-SITE PERFORMED BY BLM NRS: PAUL MURPHY 4/26/2017

Other SUPO Attachment

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BUREAU OF LAND MANAGEMENT

PWD Data Report
12/21/2017

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

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U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Bond Info Data Report

12/21/2017

Bond Information

Federal/Indian APD: FED

BLM Bond number: CA0329

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment: