

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER 1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other 1c. Type of Completion: ☐ Hydraulic Fracturing ☒ Single Zone ☐ Multiple Zone		5. Lease Serial No. NMNM017440 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No. DL 15 22 NARWHAL FED COM [331069] 220H
2. Name of Operator CHEVRON USA INCORPORATED [4323]		9. API Well No. 30-025-49082
3a. Address PO BOX 2100, DENVER, CO 80201-2100	3b. Phone No. (include area code) (303) 793-4602	10. Field and Pool, or Exploratory RED TANK BONE SPRING 97846
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SESW / 860 FSL / 1815 FWL / LAT 32.401401 / LONG -103.562984 At proposed prod. zone SWSW / 25 FSL / 1254 FWL / LAT 32.370086 / LONG -103.56477		11. Sec., T. R. M. or Blk. and Survey or Area SEC 10/T22S/R33E/NMP
14. Distance in miles and direction from nearest town or post office* 25 miles		12. County or Parish LEA
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 860 feet		16. No of acres in lease 17. Spacing Unit dedicated to this well 640.0
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 25 feet		19. Proposed Depth 9506 feet / 20388 feet
20. BLM/BIA Bond No. in file FED: ES0022		21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3563 feet
22. Approximate date work will start* 04/01/2021		23. Estimated duration 130 days
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- | | |
|---|---|
| 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 requested by the BLM. |
|---|---|

25. Signature (Electronic Submission) Title Permitting Specialist	Name (Printed/Typed) KAYLA MCCONNELL / Ph: (432) 687-7866	Date 08/26/2020
Approved by (Signature) (Electronic Submission) Title Assistant Field Manager Lands & Minerals	Name (Printed/Typed) Cody Layton / Ph: (575) 234-5959	Date 04/02/2021
Office Carlsbad Field Office		

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.

GCP Rec 05/11/2021**SL**

(Continued on page 2)

**Approval Date: 04/02/2021**
KZ
06/23/2021

*(Instructions on page 2)

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 I: 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.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

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 connects this information to an 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 Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Additional Operator Remarks

Location of Well

0. SHL: SESW / 860 FSL / 1815 FWL / TWSP: 22S / RANGE: 33E / SECTION: 10 / LAT: 32.401401 / LONG: -103.562984 (TVD: 0 feet, MD: 0 feet)

PPP: SWSW / 1247 FSL / 1183 FWL / TWSP: 22S / RANGE: 33E / SECTION: 15 / LAT: 32.38778 / LONG: -103.564985 (TVD: 9506 feet, MD: 10035 feet)

PPP: SWNW / 1408 FNL / 1254 FWL / TWSP: 22S / RANGE: 33E / SECTION: 15 / LAT: 32.395189 / LONG: -103.564824 (TVD: 9506 feet, MD: 10035 feet)

PPP: NWNW / 25 FNL / 1254 FWL / TWSP: 22S / RANGE: 33E / SECTION: 15 / LAT: 32.39897 / LONG: -103.5648 (TVD: 9506 feet, MD: 10035 feet)

BHL: SWSW / 25 FSL / 1254 FWL / TWSP: 22S / RANGE: 33E / SECTION: 22 / LAT: 32.370086 / LONG: -103.56477 (TVD: 9506 feet, MD: 20388 feet)

BLM Point of Contact

Name: Candy Vigil

Title: LIE

Phone: (575) 234-5982

Email: cvigil@blm.gov

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.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-49082	² Pool Code 97846	³ Pool Name WC-025 G-06 S223322J;BONE SPRING
⁴ Property Code 331069	⁵ Property Name DL 15 22 NARWHAL FED COM	
⁷ OGRID No. 4323	⁸ Operator Name CHEVRON U.S.A. INC.	⁶ Well Number 220H ⁹ Elevation 3563'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	10	22 SOUTH	33 EAST, N.M.P.M.		860'	SOUTH	1815'	WEST	LEA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	22	22 SOUTH	33 EAST, N.M.P.M.		25'	SOUTH	1254'	WEST	LEA

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
640			

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

PROPOSED FIRST TAKE POINT X= 737,357' Y= 509,668' LAT. 32.398846° N LONG. 103.564315° W NAD 27 X= 778,539' Y= 509,729' LAT. 32.398970° N LONG. 103.564800° W NAD83/86 PROPOSED MID POINT X= 737,399' Y= 504,412' LAT. 32.384398° N LONG. 103.564302° W NAD 27 X= 778,582' Y= 504,473' LAT. 32.384522° N LONG. 103.564786° W NAD83/86 PROPOSED LAST TAKE POINT X= 737,441' Y= 499,236' LAT. 32.370169° N LONG. 103.564287° W NAD 27 X= 778,623' Y= 499,296' LAT. 32.370292° N LONG. 103.564770° W NAD83/86	DL 15 22 NARWHAL FED COM NO. 220H WELL X= 737,911' Y= 510,557' LAT. 32.401277° N LONG. 103.562500° W NAD 27 X= 779,093' Y= 510,617' LAT. 32.401401° N LONG. 103.562984° W NAD83/86 ELEV. +3,563' NAVD88 CORNER COORDINATES TABLE (NAD 27) A - Y=511005.24, X=736092.19 B - Y=511021.52, X=738732.84 C - Y=509685.81, X=736102.72 D - Y=509701.75, X=738742.61 E - Y=504406.30, X=736144.86 F - Y=504419.02, X=738784.10 G - Y=501768.57, X=736166.19 H - Y=499128.78, X=736187.53 I - Y=499143.28, X=738823.86		¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Kayla McConnell</i> 6/9/2020 Signature Date Kayla McConnell Printed Name GNCV@chevron.com E-mail Address ¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. 09/25/2019 Date of Survey Signature and Seal of Professional Surveyor: <i>Steven M. Coleman</i> 04/02/2020 Certificate Number
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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit Original
to Appropriate
District Office

GAS CAPTURE PLAN

X Original Operator & OGRID No.: CHEVRON U S A INC 4323
☐ Amended Date: 02/10/2020
Reason for Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: A C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule 19.15.18.12.A

Well(s)/Production Facility – DAGGER LAKE CTB 4

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
DL 15 22 NARWHAL FED COM 219H	Pending	UL:O, SEC 4, T22S-R33E	263' FSL, 1372' FEL	4,135	0	
DL 15 22 NARWHAL FED COM 220H 30-025-49082	Pending	UL:O, SEC 4, T22S-R33E	264' FSL, 1322' FEL	4,135	0	
DL 15 22 NARWHAL FED COM 221H	Pending	UL:P, SEC 4, T22S-R33E	264' FSL, 1272' FEL	4,135	0	

Gathering System and Pipeline Notification

These wells will first flow to a satellite facility located in S10, T22S-R33E for well testing purposes, the produced fluid and gas will then be sent to Chevron's Dagger Lake CTB #4 production facility and compressor station located in Sec 4, T22S-R33E, Lea County, New Mexico during flowback and production. MarkWest will provide takeaway for the gas produced from the production facility.

Flowback Strategy

After the fracture treatment/completion operations, wells will be turned to permanent production facilities. Wells will have temporary sand catchers (separators) that will be installed at the well location to prevent sand from getting into the flowlines. These sand separators will be blown down periodically which will result in minimal venting of gas. Gas sales will start as soon as the wells start flowing through the production facilities unless there are operational issues with MarkWest's system at that time. Based on current information, it is Chevron's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- NGL Removal – On lease and trucked from condensate tanks
 - o Plants are expensive and uneconomical to operate when gas volume declines.
 - o Any residue gas that results in the future may be flared.

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DL 15 22 Narwhal Fed Com No. 220H

Lea County, NM

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DRILLING PLAN

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Pad Summary

The table below lists all the wells for the given pad and their respective name and TVD's (ft) for their production target intervals:

Well Name(s)	Target TVD	Formation Desc.
DL 15 22 Narwhal Fed Com No. 219H	9,506	Avalon TGT 1
DL 15 22 Narwhal Fed Com No. 220H	9,503	Avalon TGT 1
DL 15 22 Narwhal Fed Com No. 221H	9,499	Avalon TGT 1

1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

Elevation: 3593 ft

FORMATION	SUB-SEA TVD	TVD	MD	LITHOLOGIES	MIN. RESOURCES	PROD. FORMATION
Rustler	2374	1,219	1,219	ANHYD	N/A	
Castile	37	3,556	3,556	SALT	N/A	
Capitan Reef	-345	3,938	3,938	LIMESTONE	N/A	
Lamar	-1270	4,863	4,863	LIMESTONE	N/A	
Bell Canyon	-1392	4,985	4,985	Sandstone	N/A	
Cherry Canyon	-2189	5,782	5,782	Sandstone	N/A	
Brushy Canyon	-3452	7,045	7,045	Sandstone	N/A	
Bone Spring Lime	-5219	8,812	8,855	LIMESTONE	N/A	
Lower Avalon	-5878	9,471	9,680	LS/SH/SS	Oil	
Lower Avalon Target	-5913	9,506	20,388	LS/SH/SS	Oil	

WELLBORE LOCATIONS	SUB-SEA TVD	RKB TVD	MD
SHL	3593	-	-
KOP	-5337	8,930	8,972
FTP	-5910	9,503	9,880
LTP	-5844	9,437	20,313

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		900
Water	Bell Canyon	4,985
Oil/Gas	Lower Avalon	5,782

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

3. BOP EQUIPMENT

Chevron will have a minimum of a 5,000 psi rig stack (see proposed schematic) for drill out below surface casing. The 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 per hole section, unless approval from BLM is received otherwise. Flex choke hose will be used for all wells on the pad (see attached specs and variance). BOP test will be conducted by a third party.

Chevron requests a variance to use a FMC Technologies UH-S Multibowl wellhead, which will be run through the rig floor on surface casing. BOPE will be nipped up and tested after cementing surface casing. Subsequent tests will be performed as needed, not to exceed 30 days. The field report from FMC Technologies 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. All tests performed by third party.

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Chevron

DRILLING PLAN

DL 15 22 Narwhal Fed Com No. 220H

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Lea County, NM

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'	1,300'	16"	13-3/8"	54.5 #	J-55	BTC	New
Intermediate	0'	4,863'	12-1/4"	9-5/8"	40.0 #	HCK-55	LTC	New
Production	0'	20,388'	8-1/2"	5-1/2"	20.0 #	P-110	TXP BTC	New

Proposed	Hole Size	Casing Size	Top (MD)	Btm (MD)	Top (TVD)	Btm (TVD)	Top (SSTVD)	Btm (SSTVD)	Grade	Weight	Joint type
Surface	16"	13-3/8"	0'	1,300'	0'	1,300'	3,593'	2,293'	J-55	54.5 #	BTC
Intermediate	12-1/4"	9-5/8"	0'	4,863'	0'	4,863'	3,593'	-1,270'	HCK-55	40.0 #	LTC
Production	8-1/2"	5-1/2"	0'	20,388'	0'	9,520'	3,593'	-5,927'	P110	20.0 #	TXP-BTC

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

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

c. design for a particular well requires setting casing deeper than the following "worst case" design, then the Casing Safety Factors will be recalculated & 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:	1,300'	ftTVD
Intermediate Casing:	5,000'	ftTVD
Production Casing:	20,388'	ftMD

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension	Min SF Tri-Axial
Surface	1.80	2.94	3.70	2.24
Intermediate	1.33	3.02	2.15	1.48
Production	1.11	2.51	2.47	1.33

The following worst case load cases were considered for calculation of the above Min. Safety Factors:

Burst Design	Surf	Int	Prod
Pressure Test- Surface, Int, Prod Csg P external: Mud weight above TOC, PP below P internal: Test psi + next section heaviest mud in csg	X	X	X
Displace to Gas- Surf Csg P external: Mud weight above TOC, PP below P internal: Dry Gas from Next Csg Point	X		
Gas over mud (60/40) - Int Csg P external: Mud weight above TOC, PP below P internal: 60% gas over 40% mud from hole TD PP		X	
Stimulation (Frac) Pressures- Prod Csg P external: Mud weight above TOC, PP below P internal: Max inj pressure w/ heaviest injected fluid			X
Tubing leak- Prod Csg (packer at KOP) P external: Mud weight above TOC, PP below P internal: Leak just below surf, 8.45 ppg packer fluid			X
Collapse Design	Surf	Int	Prod
Full Evacuation P external: Mud weight gradient P internal: none	X	X	X
Cementing- Surf, Int, Prod Csg P external: Wet cement P internal: displacement fluid - water	X	X	X
Tension Design	Surf	Int	Prod
100k lb overpull	X	X	X

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5. **CEMENTING PROGRAM**

Slurry	Type	Top	Bottom	Sacks	Yield	Density	%Excess	Water	Volume	Additives
<u>Surface</u>					(cu ft/sk)	(ppg)	Open Hole	gal/sk	cuft	
Lead	Class C	0'	800'	662	1.69	12.8	125	8.92	1119	Extender, Antifoam, Retarder
Tail	Class C	800'	1,300'	1321	1.34	14.8	125	6.40	1770	Extender, Antifoam, Retarder
<u>Intermediate Csg</u>										
Lead	Class C	0'	3,863'	945	2.56	11.9	100	14.66	2420	Extender, Antifoam, Retarder, Viscosifier
Tail	Class C	3,863'	4,863'	382	1.33	14.8	50	6.38	507	Extender, Antifoam, Retarder, Viscosifier
<u>Production</u>										
Lead 1	Class C	800'	8,500'	879	2.49	11.5	15	14.07	2189	Extender, Antifoam, Retarder, Viscosifier
Lead 2	Class C	8,500'	20,388'	1767	1.85	13.2	20	9.87	3268	Extender, Antifoam, Retarder, Viscosifier
<u>Intermediate Csg</u>	<u>Contingency Top job</u>									
Top job contingency	Class C	0'	2,500'	1206	1.33	14.8	100	6.38	1604	Extender, Antifoam, Retarder, Viscosifier
<u>Intermediate Csg</u>	<u>Foam Cement Contingency</u>									
Cap	Class C	0'	562'	146	1.33	13.2	10	6.55	194	Extender, Antifoam, Retarder, Viscosifier
Foam Lead	Class C	562'	4,459'	1835	1.33	9.5	100	14.66	2441	Nitrogen, Surfactant, Extender, Antifoam, Retarder, Viscosifier
Tail	Class C	4,459'	4,863'	133	1.33	13.2	10	6.38	177	Extender, Antifoam, Retarder, Viscosifier
Top Out Contingency	Class C	0'	400'	19	1.3	14.8	10	6.38	25	Extender, Antifoam, Retarder, Viscosifier
<u>Intermediate Csg</u>	<u>2 Stage Contingency</u>									
1st Stage Lead (Contingent)	Class C	0'	3,863'	945	2.56	11.9	100	14.66	2420	Extender, Antifoam, Retarder, Viscosifier

1st Stage Tail	Class C	3,863'	4,863'	382	1.33	14.8	50	6.38	507	Extender, Antifoam, Retarder, Viscosifier
2nd Stage Lead	Class C	0'	2,863'	701	2.56	11.9	100	14.66	1793	Extender, Antifoam, Retarder, Viscosifier
2nd Stage Tail	Class C	2,863'	3,863'	382	1.33	14.8	50	6.38	507	Extender, Antifoam,

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 solid body type centralizer on every joint in the lateral, then every other joint to KOP. Bowspring type centralizers will be run from KOP to intermediate casing and surface.

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Chevron

DL 15 22 Narwhal Fed Com No. 220H

Lea County, NM

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6. MUD PROGRAM

From	To	Type	Weight	Viscosity	Filtrate	Notes
0'	1,300'	Fresh water mud	8.3 - 9.0	28-30	N/C	
1,300'	4,863'	Brine/OBM	8.3 - 10	28-31	15-25	
4,863'	20,388'	OBM	8.3 - 10	10-15	15-25	Due to wellbore stability, the mud program may exceed the MW window needed to maintain overbalance to pore pressure

A closed system will be used 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. And transporting of E&P waste will follow EPA regulations and accompanying manifests.

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),

A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost

7. TESTING, LOGGING, AND CORING

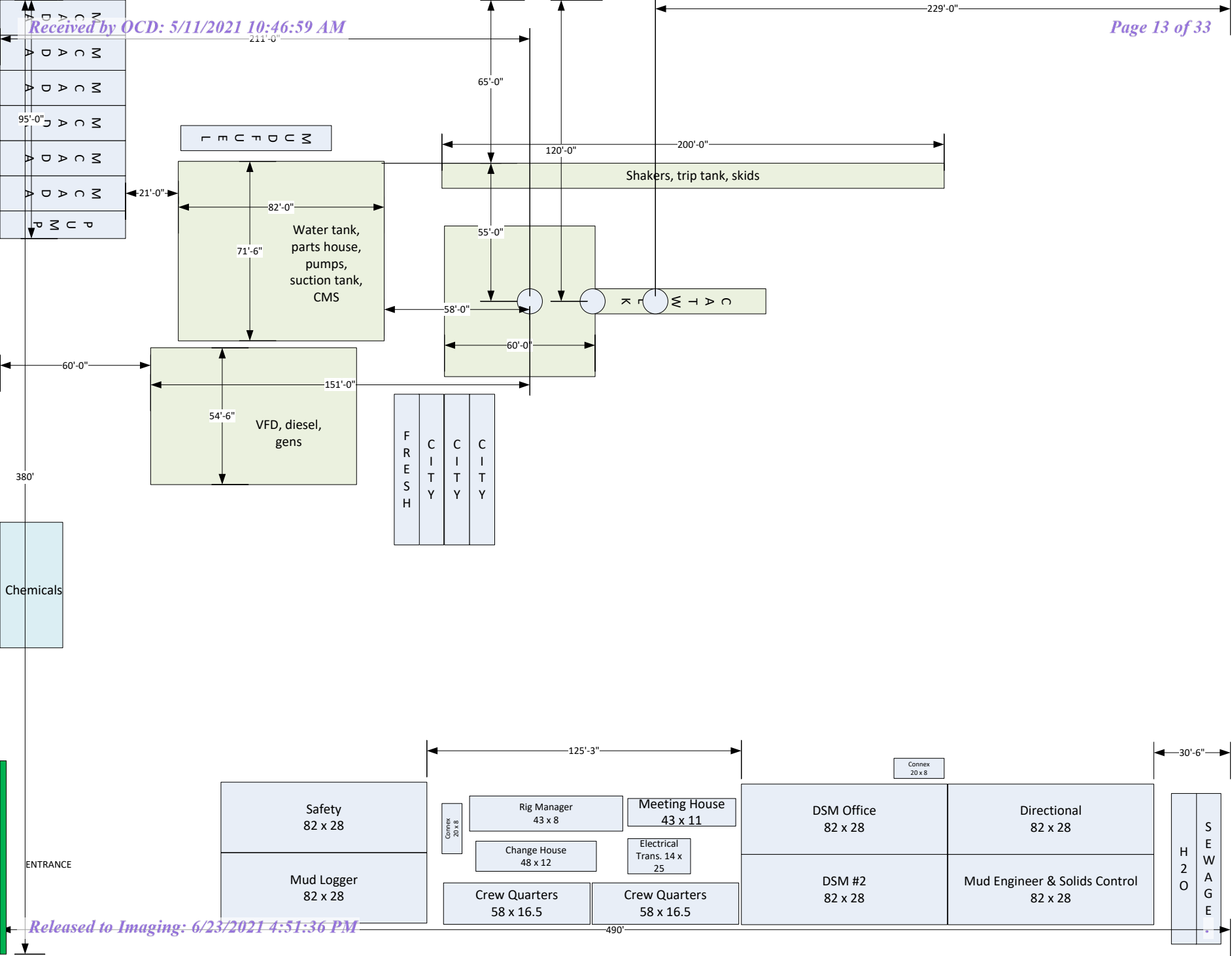
The anticipated type and amount of testing, logging, and coring are as follows:

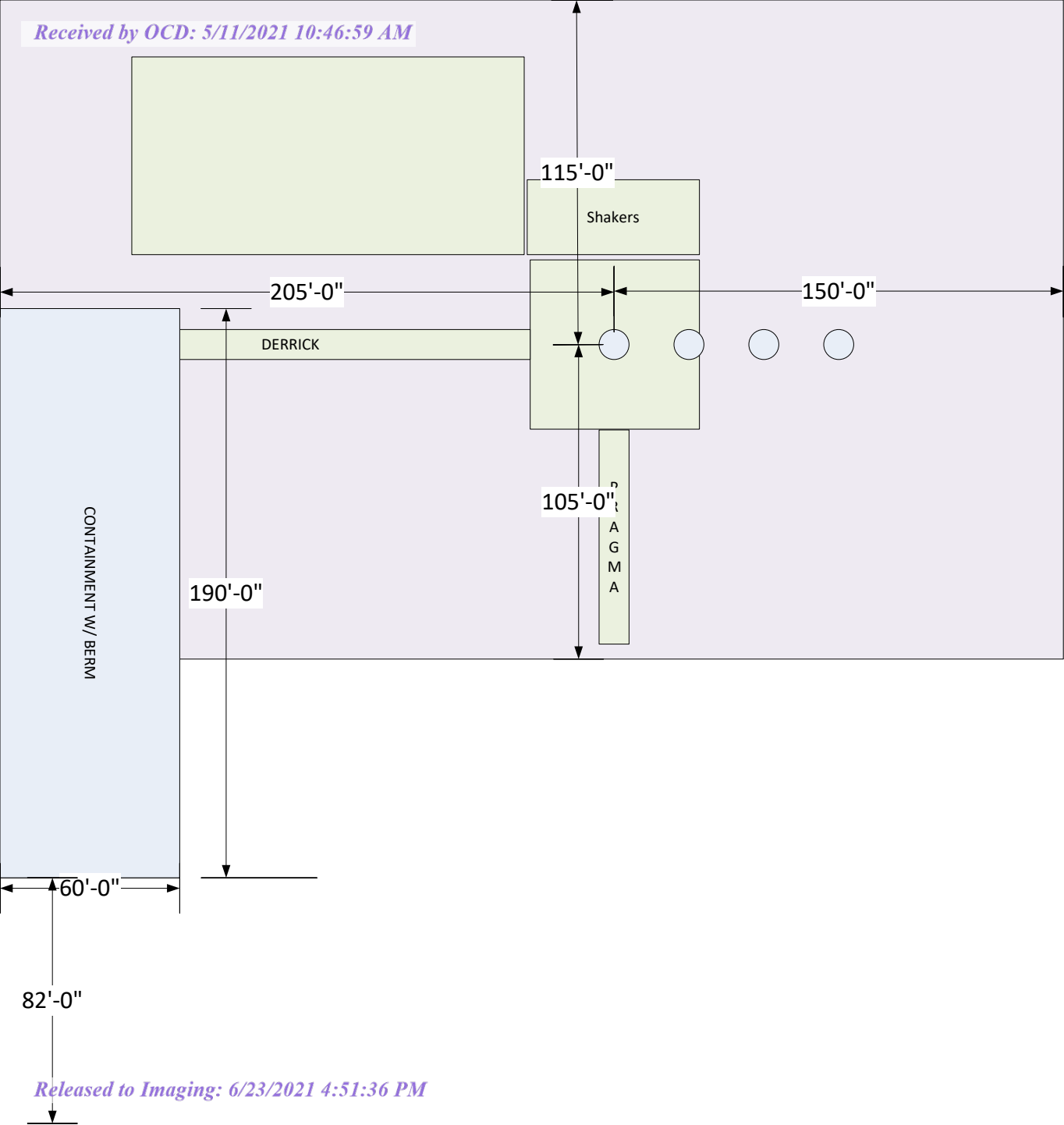
TYPE	Logs	Interval	Timing
Mudlogs	2 man mudlog	Surface casing shoe	While drilling or
LWD	MWD Gamma	Int. and Prod. Hole	While Drilling

- c. Conventional whole core samples are not planned.
- d. A directional survey will be run.

8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

- a. No abnormal pressure or temperatures are expected. Estimated BHP is: 4,353 psi
- b. Hydrogen sulfide gas is not anticipated. An H₂S Contingency plan is attached with this APD in the event that H₂S is encountered





ENTRANCE



H₂S Preparedness and Contingency Plan Summary

Training

MCBU Drilling and Completions H₂S training requirements are intended to define the minimum level of training required for employees, contractors and visitors to enter or perform work at MCBU Drilling and Completions locations that have known concentrations of H₂S.

Awareness Level

Employees and visitors to MCBU Drilling and Completions locations that have known concentrations of H₂S, who are not required to perform work in H₂S areas, will be provided with an awareness level of H₂S training prior to entering any H₂S areas. At a minimum, awareness level training will include:

1. Physical and chemical properties of H₂S
2. Health hazards of H₂S
3. Personal protective equipment
4. Information regarding potential sources of H₂S
5. Alarms and emergency evacuation procedures

Awareness level training will be developed and conducted by personnel who are qualified either by specific training, educational experience and/or work-related background.

Advanced Level H₂S Training

Employees and contractors required to work in areas that may contain H₂S will be provided with Advanced Level H₂S training prior to initial assignment. In addition to the Awareness Level requirements, Advanced Level H₂S training will include:

1. H₂S safe work practice procedures;
2. Emergency contingency plan procedures;
3. Methods to detect the presence or release of H₂S (e.g., alarms, monitoring equipment), including hands-on training with direct reading and personal monitoring H₂S equipment.
4. Basic overview of respiratory protective equipment suitable for use in H₂S environments. Note: Employees who work at sites that participate in the Chevron Respirator User program will require separate respirator training as required by the MCBU Respiratory Protection Program;
5. Basic overview of emergency rescue techniques, first aid, CPR and medical evaluation procedures. Employees who may be required to perform "standby" duties are required to receive additional first aid and CPR training, which is not covered in the Advanced Level H₂S training;
6. Proficiency examination covering all course material.

Advanced H₂S training courses will be instructed by personnel who have successfully completed an appropriate H₂S train-the-trainer development course (ANSI/ASSE Z390.1-2006) or who possess significant past experience through educational or work-related background.



H₂S Preparedness and Contingency Plan Summary

H₂S Training Certification

All employees and visitors will be issued an H₂S training certification card (or certificate) upon successful completion of the appropriate H₂S training course. Personnel working in an H₂S environment will carry a current H₂S training certification card as proof of having received the proper training on their person at all times.

Briefing Area

A minimum of two briefing areas will be established in locations that at least one area will be upwind from the well at all times. Upon recognition of an emergency situation, all personnel should assemble at the designated upwind briefing areas for instructions.

H₂S Equipment

Respiratory Protection

- a) Six 30 minute SCBAs – 2 at each briefing area and 2 in the Safety Trailer.
- b) Eight 5 minute EBAs – 5 in the dog house at the rig floor, 1 at the accumulator, 1 at the shale shakers and 1 at the mud pits.

Visual Warning System

- a) One color code sign, displaying all possible conditions, will be placed at the entrance to the location with a flag displaying the current condition.
- b) Two windsocks will be on location, one on the dog house and one on the Drill Site Manager's Trailer.

H₂S Detection and Monitoring System

- a) H₂S monitoring system (sensor head, warning light and siren) placed throughout rig.
 - Drilling Rig Locations: at a minimum, in the area of the Shale shaker, rig floor, and bell nipple.
 - Workover Rig Locations: at a minimum, in the area of the Cellar, rig floor and circulating tanks or shale shaker.



H₂S Preparedness and Contingency Plan Summary

Well Control Equipment

- a) Flare Line 150' from wellhead with igniter.
- b) Choke manifold with a remotely operated choke.
- c) Mud / gas separator

Mud Program

In the event of drilling, completions, workover and well servicing operations involving a hydrogen sulfide concentration of 100 ppm or greater the following shall be considered:

- 1. Use of a degasser
- 2. Use of a zinc based mud treatment
- 3. Increasing mud weight

Public Safety - Emergency Assistance

<u>Agency</u>	<u>Telephone Number</u>
Lea County Sheriff's Department	575-396-3611
Fire Department:	
Carlsbad	575-885-3125
Artesia	575-746-5050
Lea County Regional Medical Center	575-492-5000
Jal Community Hospital	505-395-2511
Lea County Emergency Management	575-396-8602
Poison Control Center	800-222-1222



H₂S Preparedness and Contingency Plan Summary

Chevron MCBU D&C Emergency Notifications

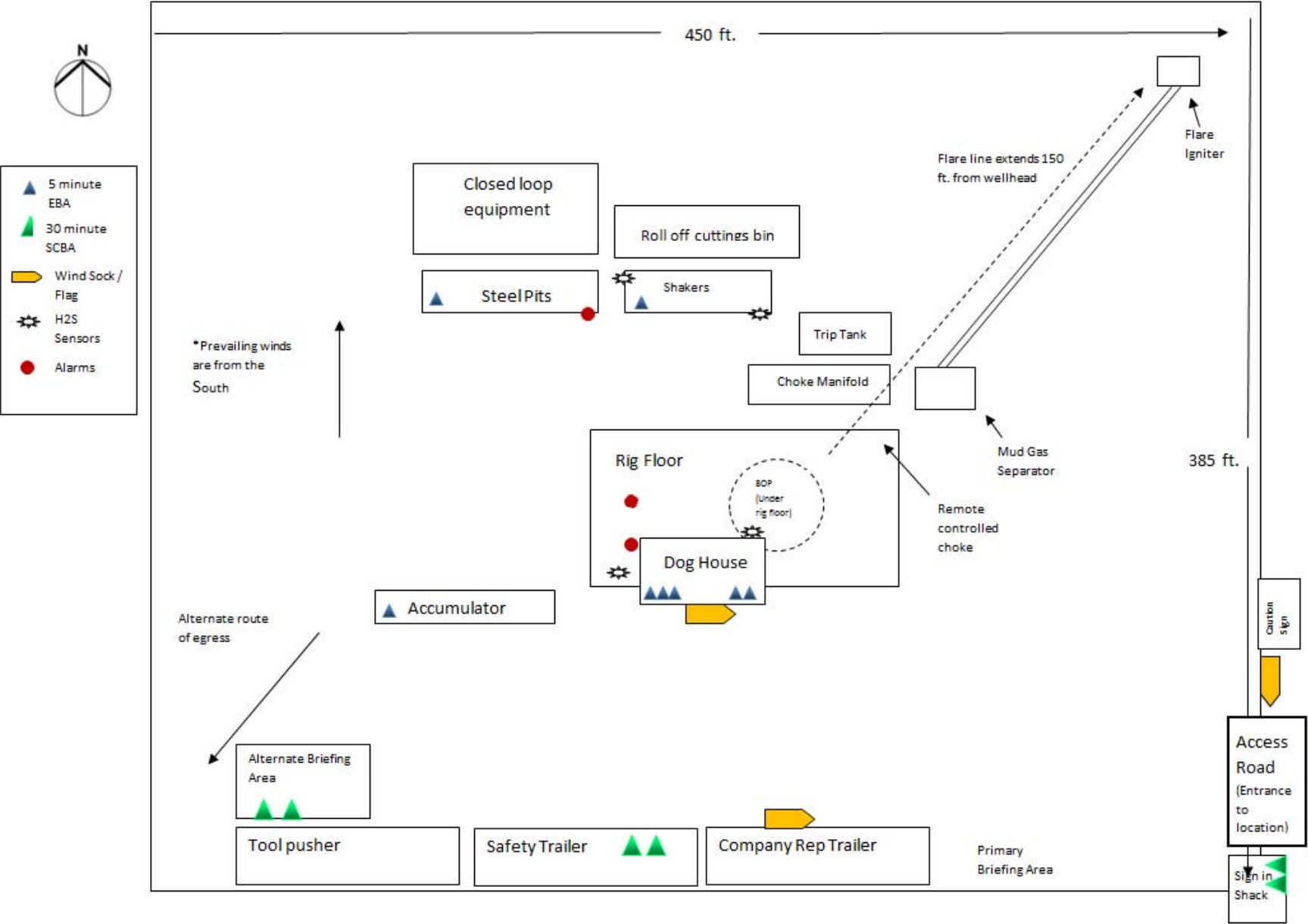
Below are lists of contacts to be used in emergency situations.

	Name	Title	Office Number	Cell Phone
1.	TBD	Drilling Engineer		
2.	TBD	Superintendent		
5.	Steve Hassmann	Drilling Manager	(713) 372-4496	832-729-3236
6.	Kyle Eastman	Operations Manager	TBD	281-755-6554
7.	TBD	D&C HES		
8.	TBD	Completion Engineer		



H₂S Preparedness and Contingency Plan Summary

Released to Imaging: 6/23/2021 4:51:36 PM





Chevron DL 15 22 Narwhal Fed Com No. 220H Rev0 jib 06Apr20 Proposal Geodetic Report (Def Plan)



Report Date: April 07, 2020 - 09:57 AM
Client: Chevron
Field: NM Lea County (NAD 27)
Structure / Slot: Chevron DL 15 22 Narwhal Fed Com / 220H
Well: DL 15 22 Narwhal Fed Com 220H
Borehole: DL 15 22 Narwhal Fed Com 220H
UWI / API#: Unknown / Unknown
Survey Name: Chevron DL 15 22 Narwhal Fed Com No. 220H Rev0 jib 06Apr20
Survey Date: April 06, 2020
Tort / AHD / DDI / ERD Ratio: 108.804' / 11726.380 ft / 6.437' / 1.234
Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 24' 4.60064", W 103° 33' 44.99776"
Location Grid N/E Y/X: N 510557.000 ftUS, E 737911.000 ftUS
CRS Grid Convergence Angle: 0.4131°
Grid Scale Factor: 0.99997392
Version / Patch: 2.10.810.1

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.539° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB = 30ft
TVD Reference Elevation: 3593.000 ft above MSL
Seabed / Ground Elevation: 3563.000 ft above MSL
Magnetic Declination: 6.566°
Total Gravity Field Strength: 998.4692mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47962.004 nT
Magnetic Dip Angle: 60.166°
Declination Date: April 06, 2020
Magnetic Declination Model: HDGM 2020
North Reference: Grid North
Grid Convergence Used: 0.4131°
Total Corr Mag North->Grid North: 6.1533°
Local Cord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	241.10	0.00	0.00	0.00	0.00	N/A	510557.00	737911.00	N 32 24 4.60	W 103 33 45.00
	100.00	0.00	241.10	100.00	0.00	0.00	0.00	0.00	510557.00	737911.00	N 32 24 4.60	W 103 33 45.00
	200.00	0.00	241.10	200.00	0.00	0.00	0.00	0.00	510557.00	737911.00	N 32 24 4.60	W 103 33 45.00
	300.00	0.00	241.10	300.00	0.00	0.00	0.00	0.00	510557.00	737911.00	N 32 24 4.60	W 103 33 45.00
	400.00	0.00	241.10	400.00	0.00	0.00	0.00	0.00	510557.00	737911.00	N 32 24 4.60	W 103 33 45.00
	500.00	0.00	241.10	500.00	0.00	0.00	0.00	0.00	510557.00	737911.00	N 32 24 4.60	W 103 33 45.00
	600.00	0.00	241.10	600.00	0.00	0.00	0.00	0.00	510557.00	737911.00	N 32 24 4.60	W 103 33 45.00
	700.00	0.00	241.10	700.00	0.00	0.00	0.00	0.00	510557.00	737911.00	N 32 24 4.60	W 103 33 45.00
	800.00	0.00	241.10	800.00	0.00	0.00	0.00	0.00	510557.00	737911.00	N 32 24 4.60	W 103 33 45.00
9 5/8" Casing	900.00	0.00	241.10	900.00	0.00	0.00	0.00	0.00	510557.00	737911.00	N 32 24 4.60	W 103 33 45.00
	1000.00	0.00	241.10	1000.00	0.00	0.00	0.00	0.00	510557.00	737911.00	N 32 24 4.60	W 103 33 45.00
Build 1.5"/100ft	1080.00	0.00	241.10	1080.00	0.00	0.00	0.00	0.00	510557.00	737911.00	N 32 24 4.60	W 103 33 45.00
	1100.00	0.30	241.10	1100.00	0.02	-0.03	-0.05	1.50	510556.97	737910.95	N 32 24 4.60	W 103 33 45.00
	1200.00	1.80	241.10	1199.98	0.90	-0.91	-1.65	1.50	510556.09	737909.35	N 32 24 4.59	W 103 33 45.02
Rustler	1219.04	2.09	241.10	1219.01	1.21	-1.22	-2.22	1.50	510555.78	737908.78	N 32 24 4.59	W 103 33 45.02
	1300.00	3.30	241.10	1299.88	3.02	-3.06	-5.54	1.50	510553.94	737905.46	N 32 24 4.57	W 103 33 45.06
	1400.00	4.80	241.10	1399.63	6.38	-6.48	-11.73	1.50	510550.53	737899.27	N 32 24 4.54	W 103 33 45.14
	1500.00	6.30	241.10	1499.15	10.99	-11.15	-20.19	1.50	510545.85	737890.81	N 32 24 4.49	W 103 33 45.23
	1600.00	7.80	241.10	1598.40	16.83	-17.08	-30.94	1.50	510539.92	737880.06	N 32 24 4.43	W 103 33 45.36
Hold	1613.34	8.00	241.10	1611.60	17.71	-17.97	-32.54	1.50	510539.03	737878.46	N 32 24 4.43	W 103 33 45.38
	1700.00	8.00	241.10	1697.43	23.45	-23.80	-43.10	0.00	510533.20	737867.90	N 32 24 4.37	W 103 33 45.50
	1800.00	8.00	241.10	1796.45	30.08	-30.52	-55.29	0.00	510526.48	737855.72	N 32 24 4.30	W 103 33 45.65
	1900.00	8.00	241.10	1895.48	36.71	-37.25	-67.47	0.00	510519.75	737843.53	N 32 24 4.24	W 103 33 45.79
	2000.00	8.00	241.10	1994.51	43.34	-43.98	-79.65	0.00	510513.02	737831.35	N 32 24 4.17	W 103 33 45.93
	2100.00	8.00	241.10	2093.53	49.96	-50.71	-91.84	0.00	510506.30	737819.17	N 32 24 4.11	W 103 33 46.07
	2200.00	8.00	241.10	2192.56	56.59	-57.43	-104.02	0.00	510499.57	737806.98	N 32 24 4.04	W 103 33 46.22
	2300.00	8.00	241.10	2291.59	63.22	-64.16	-116.20	0.00	510492.84	737794.80	N 32 24 3.97	W 103 33 46.36
	2400.00	8.00	241.10	2390.61	69.85	-70.89	-128.39	0.00	510486.12	737782.62	N 32 24 3.91	W 103 33 46.50
	2500.00	8.00	241.10	2489.64	76.48	-77.61	-140.57	0.00	510479.39	737770.43	N 32 24 3.84	W 103 33 46.64
	2600.00	8.00	241.10	2588.67	83.11	-84.34	-152.75	0.00	510472.66	737758.25	N 32 24 3.78	W 103 33 46.79
	2700.00	8.00	241.10	2687.69	89.74	-91.07	-164.94	0.00	510465.94	737746.07	N 32 24 3.71	W 103 33 46.93
	2800.00	8.00	241.10	2786.72	96.37	-97.79	-177.12	0.00	510459.21	737733.88	N 32 24 3.65	W 103 33 47.07
	2900.00	8.00	241.10	2885.75	102.99	-104.52	-189.31	0.00	510452.48	737721.70	N 32 24 3.58	W 103 33 47.21
	3000.00	8.00	241.10	2984.77	109.62	-111.25	-201.49	0.00	510445.76	737709.52	N 32 24 3.51	W 103 33 47.36
	3100.00	8.00	241.10	3083.80	116.25	-117.97	-213.67	0.00	510439.03	737697.33	N 32 24 3.45	W 103 33 47.50
	3200.00	8.00	241.10	3182.83	122.88	-124.70	-225.86	0.00	510432.30	737685.15	N 32 24 3.38	W 103 33 47.64
	3300.00	8.00	241.10	3281.85	129.51	-131.43	-238.04	0.00	510425.58	737672.97	N 32 24 3.32	W 103 33 47.79
	3400.00	8.00	241.10	3380.88	136.14	-138.15	-250.22	0.00	510418.85	737660.78	N 32 24 3.25	W 103 33 47.93
	3500.00	8.00	241.10	3479.91	142.77	-144.88	-262.41	0.00	510412.12	737648.60	N 32 24 3.19	W 103 33 48.07
Castile	3576.55	8.00	241.10	3555.71	147.84	-150.03	-271.73	0.00	510406.97	737639.27	N 32 24 3.14	W 103 33 48.18
	3600.00	8.00	241.10	3578.93	149.39	-151.61	-274.59	0.00	510405.40	737636.42	N 32 24 3.12	W 103 33 48.21
	3700.00	8.00	241.10	3677.96	156.02	-158.34	-286.77	0.00	510398.67	737624.23	N 32 24 3.05	W 103 33 48.36
	3800.00	8.00	241.10	3776.99	162.65	-165.06	-298.96	0.00	510391.94	737612.05	N 32 24 2.99	W 103 33 48.50
	3900.00	8.00	241.10	3876.01	169.28	-171.79	-311.14	0.00	510385.22	737599.87	N 32 24 2.92	W 103 33 48.64
Capitan Reef	3962.92	8.00	241.10	3938.32	173.45	-176.02	-318.81	0.00	510380.98	737592.20	N 32 24 2.88	W 103 33 48.73
	4000.00	8.00	241.10	3975.04	175.91	-178.52	-323.33	0.00	510378.49	737587.68	N 32 24 2.86	W 103 33 48.78
	4100.00	8.00	241.10	4074.07	182.54	-185.24	-335.51	0.00	510371.76	737575.50	N 32 24 2.79	W 103 33 48.93
	4200.00	8.00	241.10	4173.10	189.17	-191.97	-347.69	0.00	510365.04	737563.32	N 32 24 2.73	W 103 33 49.07
	4300.00	8.00	241.10	4272.12	195.79	-198.70	-359.88	0.00	510358.31	737551.13	N 32 24 2.66	W 103 33 49.21
	4400.00	8.00	241.10	4371.15	202.42	-205.42	-372.06	0.00	510351.58	737538.95	N 32 24 2.59	W 103 33 49.35
	4500.00	8.00	241.10	4470.18	209.05	-212.15	-384.24	0.00	510344.86	737526.77	N 32 24 2.53	W 103 33 49.50
	4600.00	8.00	241.10	4569.20	215.68	-218.88	-396.43	0.00	510338.13	737514.58	N 32 24 2.46	W 103 33 49.64
	4700.00	8.00	241.10	4668.23	222.31	-225.60	-408.61	0.00	510331.40	737502.40	N 32 24 2.40	W 103 33 49.78
	4800.00	8.00	241.10	4767.26	228.94	-232.33	-420.80	0.00	510324.68	737490.22	N 32 24 2.33	W 103 33 49.92
Lamar	4896.43	8.00	241.10	4862.75	235.33	-238.82	-432.54	0.00	510318.19	737478.47	N 32 24 2.27	W 103 33 50.06
	4900.00	8.00	241.10	4866.28	235.57	-239.06	-432.98	0.00	510317.95	737478.03	N 32 24 2.27	W 103 33 50.07
	5000.00	8.00	241.10	4965.31	242.20	-245.79	-445.16	0.00	510311.22	737465.85	N 32 24 2.20	W 103 33 50.21
Bell Canyon	5020.32	8.00	241.10	4985.43	243.54	-247.15	-447.64	0.00	510309.85	737463.37	N 32 24 2.19	W 103 33 50.24
	5100.00	8.00	241.10	5064.34	248.82	-252.51	-457.35	0.00	510304.49	737453.67	N 32 24 2.13	W 103 33 50.35
	5200.00	8.00	241.10	5163.36	255.45	-259.24	-469.53	0.00	510297.77	737441.48	N 32 24 2.07	W 103 33 50.50
	5300.00	8.00	241.10	5262.39	262.08	-265.97	-481.71	0.00	510291.04	737429.30	N 32 24 2.00	W 103 33 50.64
	5400.00	8.00	241.10	5361.42	268.71	-272.69	-493.90	0.00	510284.31	737417.12	N 32 24 1.94	W 103 33 50.78
	5500.00	8.00	241.10	5460.44	275.34	-279.42	-506.08	0.00	510277.59	737404.93	N 32 24 1.87	W 103 33 50.92
	5600.00	8.00	241.10	5559.47	281.97	-286.15	-518.26	0.00	510270.86	737392.75	N 32 24 1.81	W 103 33 51.07
Drop 1.5"/100ft	5664.45	8.00	241.10	5623.30	286.24	-290.48	-526.12	0.00	510266.53	737384.90	N 32 24 1.76	W 103 33 51.16
	5700.00	7.47	241.10	5658.52	288.52	-292.79	-530.30	1.50	510264.21	737380.71	N 32 24 1.74	W 103 33 51.21
	5800.00	5.97	241.10	5757.83	294.09	-298.45	-540.54	1.50	510258.56	737370.47	N 32 24 1.69	W 103 33 51.33
Cherry Canyon	5824.35	5.60	241.10	5782.06	296.26	-299.63	-542.69	1.50	510257.37	737368.32	N 32 24 1.67	W 103 33 51.35
	5900.00	4.47	241.10	5857.41	298.42	-302.84	-548.50	1.50	510254.17	737362.51	N 32 24 1.64	W 103 33 51.42
	6000.00	2.97	241.10	5957.20	301.51	-305.98	-554.18	1.50	510251.03	737356.84	N 32 24 1.61	W 103 33 51.49
	6100.00	1.47	241.10	6057.12	303.35	-307.85	-557.56	1.50	510249.16	737353.45	N 32 24 1.59	W 103 33 51.53
Hold Vertical	6197.79	0.00	241.10	6154.90	303.95	-308.45	-558.66	1.50	510248.56	737352.36	N 32 24 1.59	W

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	7100.00	0.00	241.10	7057.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	7200.00	0.00	241.10	7157.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	7300.00	0.00	241.10	7257.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	7400.00	0.00	241.10	7357.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	7500.00	0.00	241.10	7457.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	7600.00	0.00	241.10	7557.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	7700.00	0.00	241.10	7657.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	7800.00	0.00	241.10	7757.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	7900.00	0.00	241.10	7857.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	8000.00	0.00	241.10	7957.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	8100.00	0.00	241.10	8057.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	8200.00	0.00	241.10	8157.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	8300.00	0.00	241.10	8257.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	8400.00	0.00	241.10	8357.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	8500.00	0.00	241.10	8457.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
7" Casing	8542.89	0.00	241.10	8500.00	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	8600.00	0.00	241.10	8557.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	8700.00	0.00	241.10	8657.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	8800.00	0.00	241.10	8757.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
Bone Spring	8855.33	0.00	241.10	8812.44	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	8900.00	0.00	241.10	8857.11	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
KOP, Build 10"/100ft	8972.98	0.00	241.10	8930.09	303.95	-308.45	-558.66	0.00	510248.56	737352.36	N 32 24 1.59	W 103 33 51.54
	9000.00	2.70	179.54	8957.10	304.58	-309.09	-558.65	10.00	510247.92	737352.36	N 32 24 1.58	W 103 33 51.54
	9100.00	12.70	179.54	9056.07	317.97	-322.47	-558.55	10.00	510234.54	737352.47	N 32 24 1.45	W 103 33 51.54
	9200.00	22.70	179.54	9151.22	348.34	-352.84	-558.31	10.00	510204.17	737352.71	N 32 24 1.15	W 103 33 51.54
	9300.00	32.70	179.54	9239.64	394.76	-399.27	-557.93	10.00	510157.74	737353.08	N 32 24 0.69	W 103 33 51.54
	9400.00	42.70	179.54	9318.66	455.84	-460.34	-557.45	10.00	510096.67	737353.57	N 32 24 0.09	W 103 33 51.54
	9500.00	52.70	179.54	9385.88	529.71	-534.21	-556.86	10.00	510022.80	737354.16	N 32 23 59.35	W 103 33 51.54
	9600.00	62.70	179.54	9439.24	614.14	-618.63	-556.18	10.00	509938.39	737354.84	N 32 23 58.52	W 103 33 51.54
Lower Avalon	9680.62	70.76	179.54	9471.06	688.14	-692.63	-555.59	10.00	509864.39	737355.43	N 32 23 57.79	W 103 33 51.54
	9700.00	72.70	179.54	9477.13	706.54	-711.03	-555.44	10.00	509845.99	737355.57	N 32 23 57.60	W 103 33 51.54
	9800.00	82.70	179.54	9498.41	804.12	-808.61	-554.66	10.00	509748.41	737356.35	N 32 23 56.64	W 103 33 51.53
FLIP LOSS Ladder Pipe	9880.61	90.76	179.54	9503.00	884.53	-889.02	-554.02	10.00	509688.00	737357.00	N 32 23 55.84	W 103 33 51.53
	9900.00	90.76	179.54	9502.74	903.92	-908.41	-553.86	0.00	509648.62	737357.15	N 32 23 55.65	W 103 33 51.53
	10000.00	90.76	179.54	9501.41	1003.91	-1008.40	-553.06	0.00	509548.63	737357.95	N 32 23 54.66	W 103 33 51.53
	10100.00	90.76	179.54	9500.07	1103.91	-1108.38	-552.26	0.00	509448.65	737358.75	N 32 23 53.67	W 103 33 51.53
	10200.00	90.76	179.54	9498.74	1203.90	-1208.37	-551.47	0.00	509348.66	737359.55	N 32 23 52.68	W 103 33 51.53
	10300.00	90.76	179.54	9497.41	1303.89	-1308.36	-550.67	0.00	509248.68	737360.35	N 32 23 51.69	W 103 33 51.53
	10400.00	90.76	179.54	9496.08	1403.88	-1408.35	-549.87	0.00	509148.69	737361.15	N 32 23 50.70	W 103 33 51.53
	10500.00	90.76	179.54	9494.75	1503.87	-1508.34	-549.07	0.00	509048.71	737361.95	N 32 23 49.71	W 103 33 51.53
	10600.00	90.76	179.54	9493.41	1603.86	-1608.32	-548.27	0.00	508948.72	737362.75	N 32 23 48.73	W 103 33 51.53
	10700.00	90.76	179.54	9492.08	1703.85	-1708.31	-547.47	0.00	508848.74	737363.55	N 32 23 47.74	W 103 33 51.53
	10800.00	90.76	179.54	9490.75	1803.84	-1808.30	-546.67	0.00	508748.75	737364.35	N 32 23 46.75	W 103 33 51.53
	10900.00	90.76	179.54	9489.42	1903.83	-1908.29	-545.87	0.00	508648.77	737365.15	N 32 23 45.76	W 103 33 51.52
	11000.00	90.76	179.54	9488.09	2003.82	-2008.28	-545.07	0.00	508548.78	737365.95	N 32 23 44.77	W 103 33 51.52
	11100.00	90.76	179.54	9486.75	2103.82	-2108.26	-544.27	0.00	508448.80	737366.74	N 32 23 43.78	W 103 33 51.52
	11200.00	90.76	179.54	9485.42	2203.81	-2208.25	-543.47	0.00	508348.81	737367.54	N 32 23 42.79	W 103 33 51.52
	11300.00	90.76	179.54	9484.09	2303.80	-2308.24	-542.67	0.00	508248.83	737368.34	N 32 23 41.80	W 103 33 51.52
	11400.00	90.76	179.54	9482.76	2403.79	-2408.23	-541.87	0.00	508148.84	737369.14	N 32 23 40.81	W 103 33 51.52
	11500.00	90.76	179.54	9481.43	2503.78	-2508.22	-541.07	0.00	508048.85	737369.94	N 32 23 39.82	W 103 33 51.52
	11600.00	90.76	179.54	9480.09	2603.77	-2608.20	-540.27	0.00	507948.87	737370.74	N 32 23 38.83	W 103 33 51.52
	11700.00	90.76	179.54	9478.76	2703.76	-2708.19	-539.47	0.00	507848.88	737371.54	N 32 23 37.84	W 103 33 51.52
	11800.00	90.76	179.54	9477.43	2803.75	-2808.18	-538.67	0.00	507748.90	737372.34	N 32 23 36.85	W 103 33 51.52
	11900.00	90.76	179.54	9476.10	2903.75	-2908.17	-537.88	0.00	507648.91	737373.14	N 32 23 35.86	W 103 33 51.51
	12000.00	90.76	179.54	9474.77	3003.74	-3008.16	-537.08	0.00	507548.93	737373.94	N 32 23 34.87	W 103 33 51.51
	12100.00	90.76	179.54	9473.43	3103.73	-3108.14	-536.28	0.00	507448.94	737374.74	N 32 23 33.88	W 103 33 51.51
	12200.00	90.76	179.54	9472.10	3203.72	-3208.13	-535.48	0.00	507348.96	737375.54	N 32 23 32.89	W 103 33 51.51
Lower Avalon	12278.28	90.76	179.54	9471.06	3281.99	-3286.40	-534.85	0.00	507270.70	737376.16	N 32 23 32.12	W 103 33 51.51
	12300.00	90.76	179.54	9470.77	3303.71	-3308.12	-534.68	0.00	507248.97	737376.34	N 32 23 31.91	W 103 33 51.51
	12400.00	90.76	179.54	9469.44	3403.70	-3408.11	-533.88	0.00	507148.99	737377.14	N 32 23 30.92	W 103 33 51.51
	12500.00	90.76	179.54	9468.11	3503.69	-3508.09	-533.08	0.00	507049.00	737377.94	N 32 23 29.93	W 103 33 51.51
	12508.00	90.76	179.54	9468.00	3511.70	-3516.10	-533.01	0.00	507041.00	737378.00	N 32 23 29.85	W 103 33 51.51
IFP1, Drop 2"/100ft Hold	12551.98	89.88	179.54	9467.75	3555.67	-3560.07	-532.66	2.00	506997.03	737378.35	N 32 23 29.41	W 103 33 51.51
	12600.00	89.88	179.54	9467.85	3603.69	-3608.09	-532.28	0.00	506949.01	737378.74	N 32 23 28.94	W 103 33 51.51
	12700.00	89.88	179.54	9468.05	3703.69	-3708.09	-531.48	0.00	506849.02	737379.54	N 32 23 27.95	W 103 33 51.51
	12800.00	89.88	179.54	9468.26	3803.69	-3808.08	-530.68	0.00	506749.02	737380.33	N 32 23 26.96	W 103 33 51.51
	12900.00	89.88	179.54	9468.46	3903.69	-3908.08	-529.88	0.00	506649.03	737381.13	N 32 23 25.97	W 103 33 51.51
	13000.00	89.88	179.54	9468.66	4003.69	-4008.08	-529.08	0.00	506549.04	737381.93	N 32 23 24.98	W 103 33 51.50
	13100.00	89.88	179.54	9468.86	4103.69	-4108.07	-528.28	0.00	506449.04	737382.73	N 32 23 23.99	W 103 33 51.50
	13200.00	89.88	179.54	9469.07	4203.69	-4208.07	-527.48	0.00	506349.05	737383.53	N 32 23 23.00	W 103 33 51.50
	13300.00	89.88	179.54	9469.27	4303.69	-4308.07	-526.68	0.00	506249.06	737384.33	N 32 23 22.01	W 103 33 51.50
	13400.00	89.88	179.54	9469.47	4403.69	-4408.06	-525.88	0.00	506149.06	737385.13	N 32 23 21.02	W 103 33 51.50
	13500.00	89.88	179.54	9469.68	4503.69	-4508.06	-525.08	0.00	506049.07	737385.93	N 32 23 20.03	W 103 33 51.50
	13600.00	89.88	179.54	9469.88	4603.69	-4608.06	-524.28	0.00	505949.07	737386.73	N 32 23 19.04	W 103 33 51.50
	13700.00	89.88	179.54	9470.08	4703.69	-4708.05	-523.48	0.00	505849.08	737387.53	N 32 23 18.05	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	16900.00	89.85	179.54	9477.70	7903.68	-7907.94	-497.90	0.00	502649.28	737413.11	N 32 22 46.39	W 103 33 51.47
	17000.00	89.85	179.54	9477.97	8003.68	-8007.94	-497.10	0.00	502549.29	737413.91	N 32 22 45.40	W 103 33 51.47
	17100.00	89.85	179.54	9478.24	8103.68	-8107.93	-496.30	0.00	502449.29	737414.71	N 32 22 44.41	W 103 33 51.47
	17200.00	89.85	179.54	9478.50	8203.68	-8207.93	-495.50	0.00	502349.30	737415.51	N 32 22 43.42	W 103 33 51.47
	17300.00	89.85	179.54	9478.77	8303.68	-8307.93	-494.70	0.00	502249.31	737416.31	N 32 22 42.43	W 103 33 51.46
	17400.00	89.85	179.54	9479.04	8403.68	-8407.92	-493.90	0.00	502149.31	737417.11	N 32 22 41.44	W 103 33 51.46
	17500.00	89.85	179.54	9479.30	8503.68	-8507.92	-493.10	0.00	502049.32	737417.91	N 32 22 40.45	W 103 33 51.46
	17600.00	89.85	179.54	9479.57	8603.68	-8607.92	-492.30	0.00	501949.33	737418.71	N 32 22 39.46	W 103 33 51.46
	17700.00	89.85	179.54	9479.84	8703.68	-8707.91	-491.50	0.00	501849.33	737419.51	N 32 22 38.47	W 103 33 51.46
	17761.34	89.85	179.54	9480.00	8765.01	-8769.25	-491.01	0.00	501788.00	737420.00	N 32 22 37.86	W 103 33 51.46
IFP3, Build 2"/100ft	17800.00	90.62	179.54	9479.84	8803.68	-8807.93	-490.70	2.00	501749.34	737420.31	N 32 22 37.48	W 103 33 51.46
Hold	17817.56	90.97	179.54	9479.60	8821.23	-8825.46	-490.56	2.00	501731.79	737420.45	N 32 22 37.31	W 103 33 51.46
	17900.00	90.97	179.54	9478.20	8903.66	-8907.89	-489.91	0.00	501649.36	737421.11	N 32 22 36.49	W 103 33 51.46
	18000.00	90.97	179.54	9476.50	9003.65	-9007.87	-489.11	0.00	501549.38	737421.91	N 32 22 35.50	W 103 33 51.46
	18100.00	90.97	179.54	9474.81	9103.63	-9107.86	-488.31	0.00	501449.40	737422.71	N 32 22 34.51	W 103 33 51.46
	18200.00	90.97	179.54	9473.11	9203.62	-9207.84	-487.51	0.00	501349.42	737423.51	N 32 22 33.52	W 103 33 51.46
	18300.00	90.97	179.54	9471.42	9303.60	-9307.82	-486.71	0.00	501249.44	737424.31	N 32 22 32.53	W 103 33 51.45
Lower Avalon	18321.12	90.97	179.54	9471.06	9324.73	-9328.94	-486.54	0.00	501228.32	737424.47	N 32 22 32.33	W 103 33 51.45
	18400.00	90.97	179.54	9469.72	9403.59	-9407.80	-485.91	0.00	501149.46	737425.10	N 32 22 31.55	W 103 33 51.45
	18500.00	90.97	179.54	9468.03	9503.58	-9507.79	-485.11	0.00	501049.48	737425.90	N 32 22 30.56	W 103 33 51.45
	18600.00	90.97	179.54	9466.33	9603.56	-9607.77	-484.31	0.00	500949.50	737426.70	N 32 22 29.57	W 103 33 51.45
	18700.00	90.97	179.54	9464.64	9703.55	-9707.75	-483.51	0.00	500849.52	737427.50	N 32 22 28.58	W 103 33 51.45
	18800.00	90.97	179.54	9462.94	9803.53	-9807.73	-482.71	0.00	500749.54	737428.30	N 32 22 27.59	W 103 33 51.45
	18900.00	90.97	179.54	9461.24	9903.52	-9907.72	-481.91	0.00	500649.56	737429.10	N 32 22 26.60	W 103 33 51.45
	19000.00	90.97	179.54	9459.55	10003.50	-10007.70	-481.11	0.00	500549.58	737429.90	N 32 22 25.61	W 103 33 51.45
	19100.00	90.97	179.54	9457.85	10103.49	-10107.68	-480.31	0.00	500449.60	737430.70	N 32 22 24.62	W 103 33 51.45
	19200.00	90.97	179.54	9456.16	10203.47	-10207.66	-479.52	0.00	500349.62	737431.50	N 32 22 23.63	W 103 33 51.45
	19300.00	90.97	179.54	9454.46	10303.46	-10307.65	-478.72	0.00	500249.64	737432.30	N 32 22 22.64	W 103 33 51.45
	19400.00	90.97	179.54	9452.77	10403.45	-10407.63	-477.92	0.00	500149.66	737433.10	N 32 22 21.65	W 103 33 51.44
	19500.00	90.97	179.54	9451.07	10503.43	-10507.61	-477.12	0.00	500049.68	737433.90	N 32 22 20.66	W 103 33 51.44
	19600.00	90.97	179.54	9449.38	10603.42	-10607.59	-476.32	0.00	499949.70	737434.70	N 32 22 19.67	W 103 33 51.44
	19700.00	90.97	179.54	9447.68	10703.40	-10707.58	-475.52	0.00	499849.73	737435.49	N 32 22 18.68	W 103 33 51.44
	19800.00	90.97	179.54	9445.98	10803.39	-10807.56	-474.72	0.00	499749.75	737436.29	N 32 22 17.69	W 103 33 51.44
	19900.00	90.97	179.54	9444.29	10903.37	-10907.54	-473.92	0.00	499649.77	737437.09	N 32 22 16.70	W 103 33 51.44
	20000.00	90.97	179.54	9442.59	11003.36	-11007.52	-473.12	0.00	499549.79	737437.89	N 32 22 15.72	W 103 33 51.44
	20100.00	90.97	179.54	9440.90	11103.35	-11107.51	-472.32	0.00	499449.81	737438.69	N 32 22 14.73	W 103 33 51.44
	20200.00	90.97	179.54	9439.20	11203.33	-11207.49	-471.52	0.00	499349.83	737439.49	N 32 22 13.74	W 103 33 51.44
	20300.00	90.97	179.54	9437.51	11303.32	-11307.47	-470.72	0.00	499249.85	737440.29	N 32 22 12.75	W 103 33 51.44
LTP Cross	20313.88	90.97	179.54	9437.27	11317.20	-11321.35	-470.61	0.00	499235.97	737440.40	N 32 22 12.61	W 103 33 51.44
DL 15 22 Narwhal Fed Com No. 220H - PBHL	20388.87	90.97	179.54	9436.00	11392.17	-11396.32	-470.01	0.00	499161.00	737441.00	N 32 22 11.87	W 103 33 51.44

Survey Type:

Def Plan

Survey Error Model:

ISCWSA Rev 3 *** 3-D 97.071% Confidence 3.0000 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	30.000	1/100.000	30.000	30.000		B001Mb_MWD+HRGM-Depth Only	DL 15 22 Narwhal Fed Com 220H / Chevron DL 15 22 Narwhal Fed Com No. 220H Rev0 jib 06Apr20
	1	30.000	20388.866	1/100.000	30.000	30.000		B001Mb_MWD+HRGM	DL 15 22 Narwhal Fed Com 220H / Chevron DL 15 22 Narwhal Fed



H₂S Preparedness and Contingency Plan Summary

H₂S Training Certification

All employees and visitors will be issued an H₂S training certification card (or certificate) upon successful completion of the appropriate H₂S training course. Personnel working in an H₂S environment will carry a current H₂S training certification card as proof of having received the proper training on their person at all times.

Briefing Area

A minimum of two briefing areas will be established in locations that at least one area will be upwind from the well at all times. Upon recognition of an emergency situation, all personnel should assemble at the designated upwind briefing areas for instructions.

H₂S Equipment

Respiratory Protection

- a) Six 30 minute SCBAs – 2 at each briefing area and 2 in the Safety Trailer.
- b) Eight 5 minute EBAs – 5 in the dog house at the rig floor, 1 at the accumulator, 1 at the shale shakers and 1 at the mud pits.

Visual Warning System

- a) One color code sign, displaying all possible conditions, will be placed at the entrance to the location with a flag displaying the current condition.
- b) Two windsocks will be on location, one on the dog house and one on the Drill Site Manager's Trailer.

H₂S Detection and Monitoring System

- a) H₂S monitoring system (sensor head, warning light and siren) placed throughout rig.
 - Drilling Rig Locations: at a minimum, in the area of the Shale shaker, rig floor, and bell nipple.
 - Workover Rig Locations: at a minimum, in the area of the Cellar, rig floor and circulating tanks or shale shaker.



H₂S Preparedness and Contingency Plan Summary

Well Control Equipment

- a) Flare Line 150' from wellhead with igniter.
- b) Choke manifold with a remotely operated choke.
- c) Mud / gas separator

Mud Program

In the event of drilling, completions, workover and well servicing operations involving a hydrogen sulfide concentration of 100 ppm or greater the following shall be considered:

- 1. Use of a degasser
- 2. Use of a zinc based mud treatment
- 3. Increasing mud weight

Public Safety - Emergency Assistance

<u>Agency</u>	<u>Telephone Number</u>
Lea County Sheriff's Department	575-396-3611
Fire Department:	
Carlsbad	575-885-3125
Artesia	575-746-5050
Lea County Regional Medical Center	575-492-5000
Jal Community Hospital	505-395-2511
Lea County Emergency Management	575-396-8602
Poison Control Center	800-222-1222



H₂S Preparedness and Contingency Plan Summary

Chevron MCBU D&C Emergency Notifications

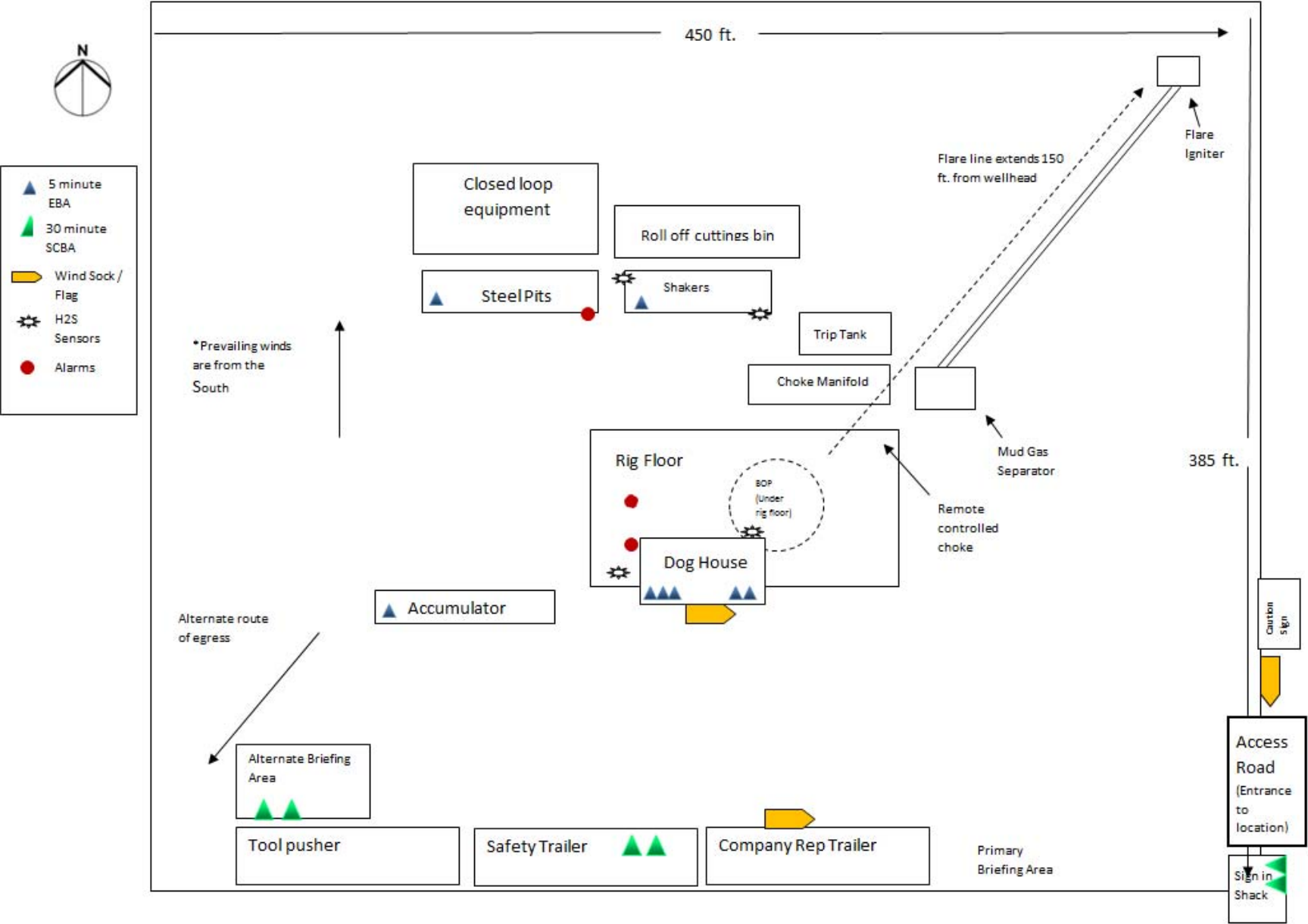
Below are lists of contacts to be used in emergency situations.

	Name	Title	Office Number	Cell Phone
1.	TBD	Drilling Engineer		
2.	TBD	Superintendent		
5.	Steve Hassmann	Drilling Manager	(713) 372-4496	832-729-3236
6.	Kyle Eastman	Operations Manager	TBD	281-755-6554
7.	TBD	D&C HES		
8.	TBD	Completion Engineer		



H₂S Preparedness and Contingency Plan Summary

Released to Imaging: 6/23/2021 4:51:36 PM



Received by OCD: 5/11/2021 10:46:59 AM

ONSHORE ORDER NO. 1

CONFIDENTIAL -- TIGHT HOLE

Chevron

DRILLING PLAN

DL 15 22 Narwhal Fed Com No. 219H

PAGE: 4

Lea County, NM

6. MUD PROGRAM

From	To	Type	Weight	Viscosity	Filtrate	Notes
0'	1,300'	Fresh water mud	8.3 - 9.0	28-30	N/C	
1,300'	4,863'	Brine/OBM	8.3 - 10	28-31	15-25	
4,863'	0'	OBM	8.3 - 10	10-15	15-25	Due to wellbore stability, the mud program may exceed the MW window needed to maintain overbalance to pore pressure

A closed system will be used 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. And transporting of E&P waste will follow EPA regulations and accompanying manifests.

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),

A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost

7. TESTING, LOGGING, AND CORING

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

TYPE	Logs	Interval	Timing
Mudlogs	2 man mudlog	Surface casing shoe	While drilling or
LWD	MWD Gamma	Int. and Prod. Hole	While Drilling
Pilot Hole OH Logs:			

- c. Conventional whole core samples are not planned.
- d. A directional survey will be run.

8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

- a. No abnormal pressure or temperatures are expected. Estimated BHP is: 4,353 psi
- b. Hydrogen sulfide gas is not anticipated. An H₂S Contingency plan is attached with this APD in the event that H₂S is encountered

ONSHORE ORDER NO. 1

Chevron

DL 15 22 Narwhal Fed Com No. 219H

Lea County, NM

CONFIDENTIAL -- TIGHT HOLE

DRILLING PLAN

PAGE: 1

Pad Summary

The table below lists all the wells for the given pad and their respective name and TVD's (ft) for their production target intervals:

Well Name(s)	Target TVD	Formation Desc.
DL 15 22 Narwhal Fed Com No. 219H	9,506	Avalon TGT 1
DL 15 22 Narwhal Fed Com No. 220H	9,503	Avalon TGT 1
DL 15 22 Narwhal Fed Com No. 221H	9,499	Avalon TGT 1

1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

Elevation: 3593 ft

FORMATION	SUB-SEA TVD	TVD	MD	LITHOLOGIES	MIN. RESOURCES	PROD. FORMATION
Rustler	2374	1,219	1,219	ANHYD	N/A	
Castile	37	3,556	3,556	SALT	N/A	
Capitan Reef	-345	3,938	3,938	LIMESTONE	N/A	
Lamar	-1270	4,863	4,863	LIMESTONE	N/A	
Bell Canyon	-1392	4,985	4,985	Sandstone	N/A	
Cherry Canyon	-2189	5,782	5,782	Sandstone	N/A	
Brushy Canyon	-3452	7,045	7,045	Sandstone	N/A	
Bone Spring Lime	-5219	8,812	9,011	LIMESTONE	N/A	
Lower Avalon	-5878	9,471	9,831	LS/SH/SS	Oil	
Lower Avalon Target	-5913	9,506	20,543	LS/SH/SS	Oil	

WELLBORE LOCATIONS	SUB-SEA TVD	RKB TVD	MD
SHL	3593	-	-
KOP	-5340	8,933	9,132
FTP	-5913	9,506	10,035
LTP	-5818	9,411	20,468

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		900
Water	Bell Canyon	4,985
Oil/Gas	Lower Avalon	5,782

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

3. BOP EQUIPMENT

Chevron will have a minimum of a 5,000 psi rig stack (see proposed schematic) for drill out below surface casing. The 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 per hole section, unless approval from BLM is received otherwise. Flex choke hose will be used for all wells on the pad (see attached specs and variance). BOP test will be conducted by a third party.

Delaware Basin Changes to APD for Federal Well



CHEVRON CONTACT:

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DRILLING ENGINEER
1400 SMITH ST.
HOUSTON, TX 77002

DESK: HOU140/43RD FLOOR
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Summary of Changes to MPD Submission

BOP Equipment – CoFlex Hose (Section 3 of 9 Point Drilling Plan in MPD)

BOP Equipment – CoFlex Hose

Summary: Variance to use a CoFlex hose between BOP and choke manifold not requested in original submittal.

As Defined in MPD:	As Planned on Well:
Variance to use CoFlex hose not requested.	Chevron requests a variance to use a CoFlex hose with a <u>metal protective covering</u> that will be utilized between the BOP and Choke manifold. Please refer to the attached testing and specification documents.

BLOWOUT PREVENTER SCHEMATIC

Operation:

Intermediate & Production Drilling Operations

Minimum System operation pressure

5,000 psi

BOP Stack

Part	Size	Pressure Rating	Description
A	13-5/8"	N/A	Rotating Head/Bell nipple
B	13-5/8"	5,000	Annular
C	13-5/8"	10,000	Blind Ram
D	13-5/8"	10,000	Pipe Ram
E	13-5/8"	10,000	Mud Cross
F	13-5/8"	10,000	Pipe Ram

Kill Line

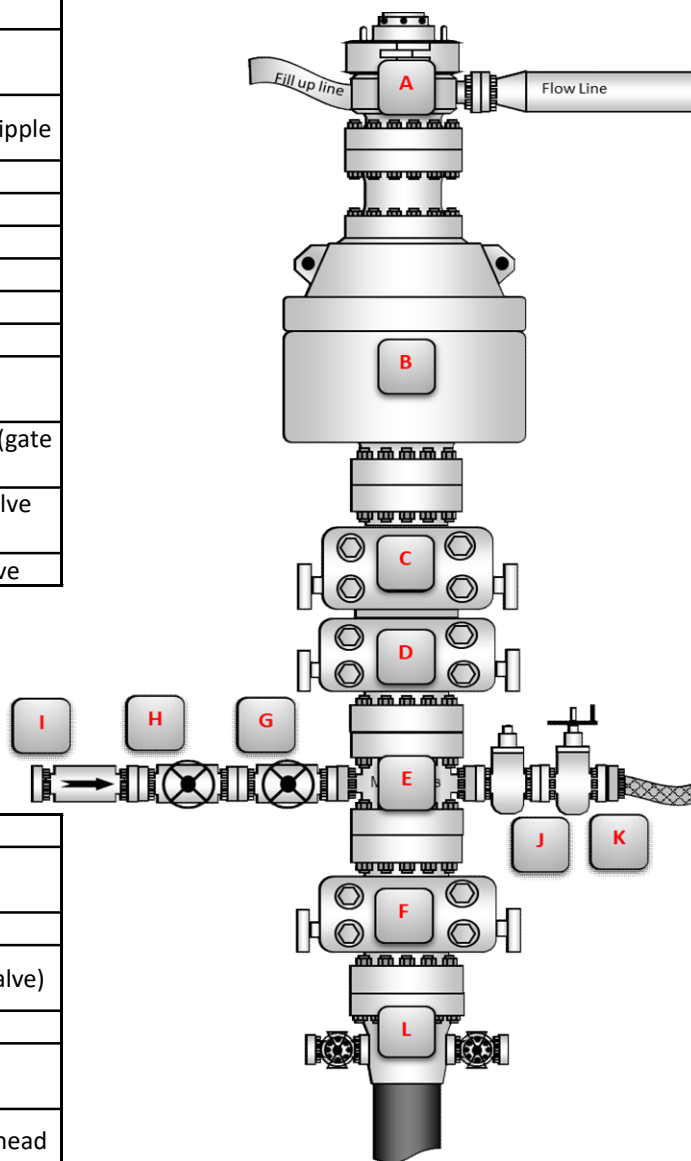
Part	Size	Pressure Rating	Description
G	2"	10,000	Inside Kill Line Valve (gate valve)
H	2"	10,000	Outside Kill Line Valve (gate valve)
I	2"	10,000	Kill Line Check valve

Choke line

Part	Size	Pressure Rating	Description
J	3"	10,000	HCR (gate valve)
K	3"	10,000	Manual HCR (gate valve)

Wellhead

Part	Size	Pressure Rating	Description
L	13-5/8"	5,000	FMC Multibowl wellhead



BOP Installation Checklist: The following items must be verified and checked off prior to pressure testing 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.

All valves on the kill line and choke line will be full opening and will allow straight flow through.

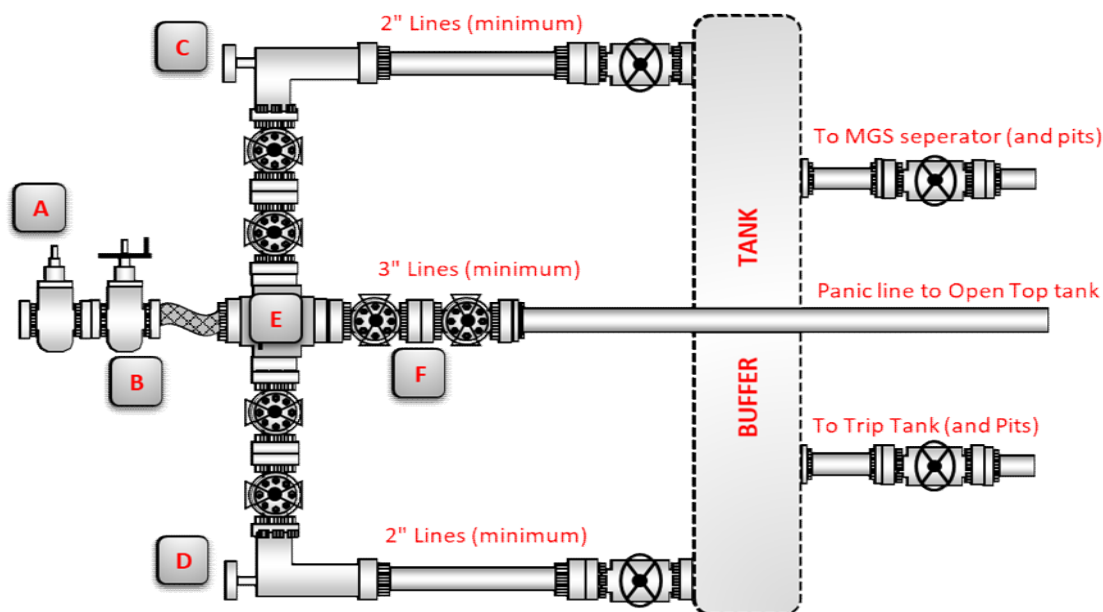
Manual (hand wheels) or automatic locking devices will be installed on all ram preventers. Hand wheels will also be installed on all manual valves on the choke and kill line.

A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will remain open unless accumulator is inoperative.

Upper kelly cock valve with handle will be available on rig floor along with saved valve and subs to fit all drill string connections in use.

CHOKE MANIFOLD SCHEMATIC

Operation:		Intermediate & Production	
Minimum System operation pressure		5,000 psi	
<u>Choke Manifold</u>			
Part	Size	Pressure Rating	Description
A	3"	10,000	HCR (remotely operated)
B	3"	10,000	HCR (manually operated)
C	2"	10,000	Remotely operated choke
D	2"	10,000	Adjustable choke
E	3"	10,000	Crown valve with pressure gage
F	3"	10,000	Panic line valves



Choke Manifold Installation Checklist: The following items must be verified and checked off prior to pressure testing 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 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.

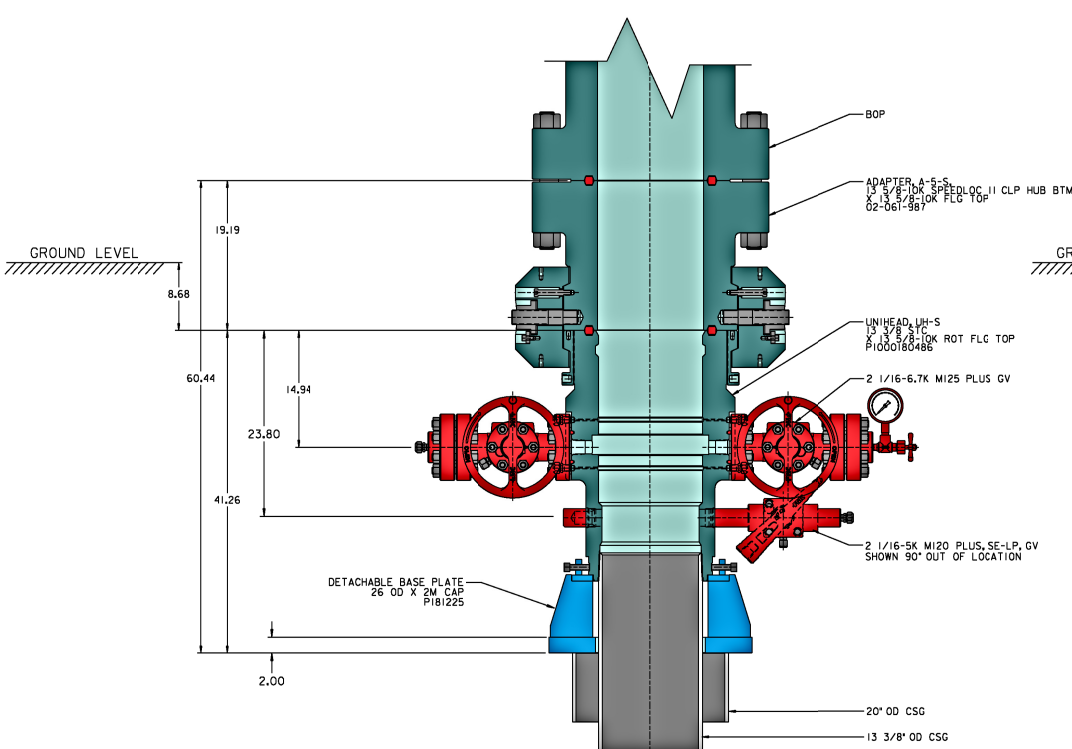
All valves (except chokes) on choke line, kill line and choke manifold will be full opening and will allow straight through flow. This excludes any valves between the mud gas separator and shale shakers.

All manual valves will have hand wheels installed.

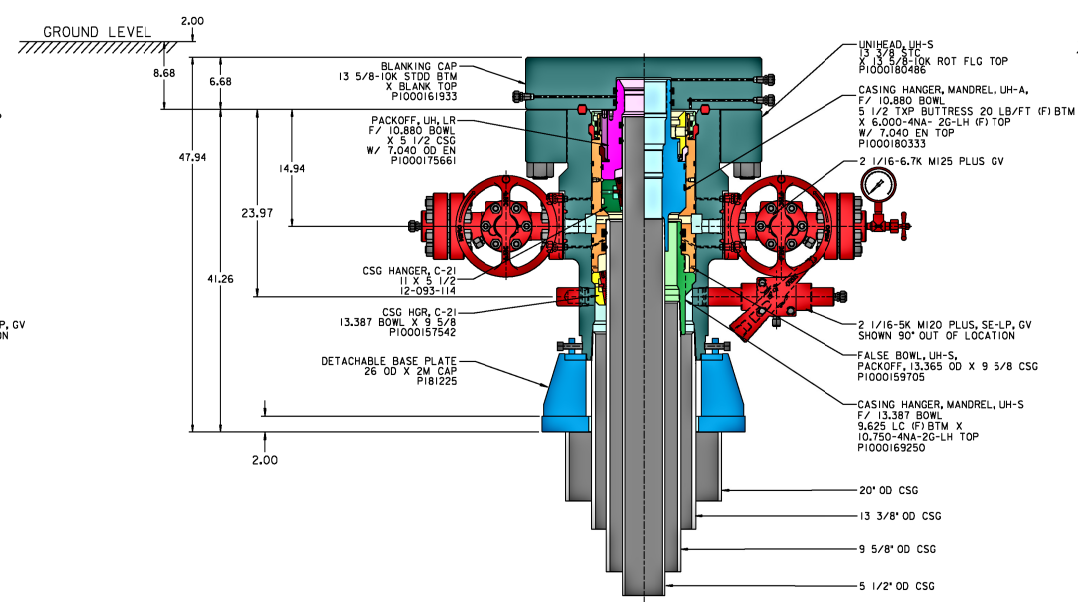
Flare systems will have an effective method for ignition.

All connections will be flanged, welded or clamped

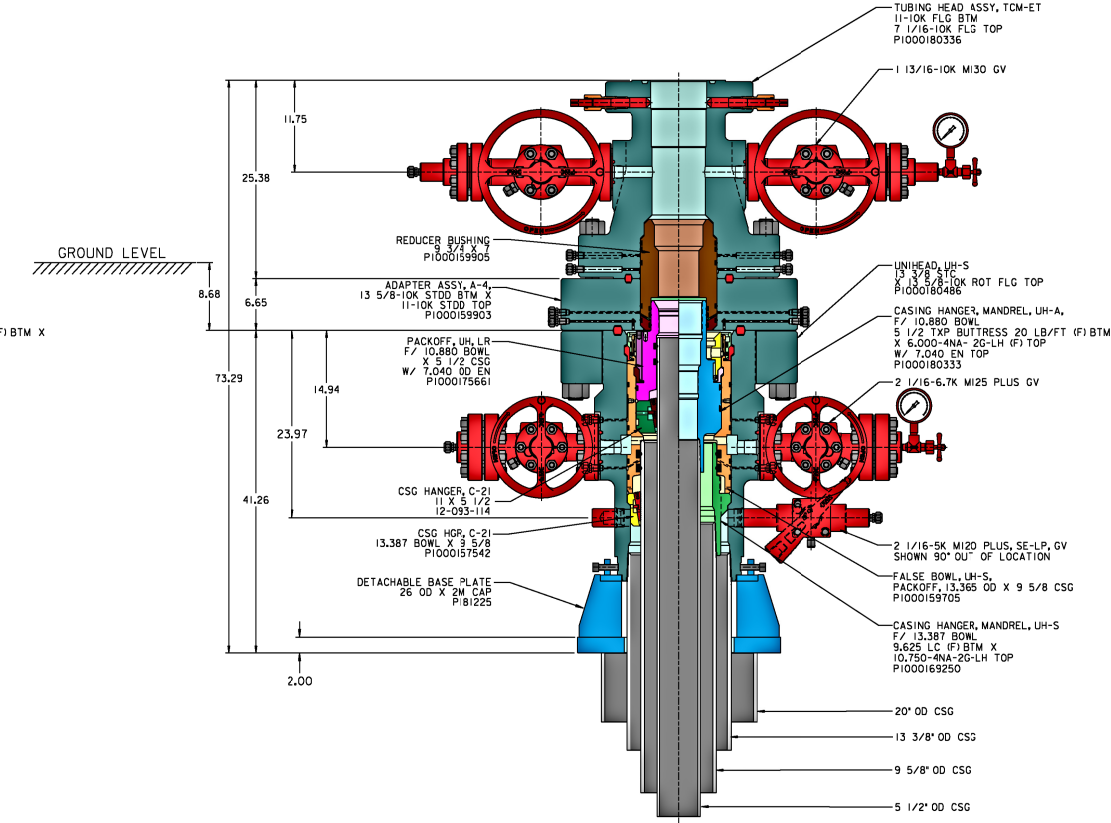
If buffer tank is used, a valve will be used on all lines at any entry or exit point to or from the buffer tank.



DRILLING MODE



CAPPING MODE



COMPLETION MODE

6650 PSI UH-S
CHEVRON
20 X 13 3/8 X 9 5/8 X 5 1/2

PRIVATE AND CONFIDENTIAL		DESCRIPTION		DRAWN BY: T. PHAM		DATE: 03-07-17		TechnipFMC	
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				APPROVED BY: J. GARZA				DRAWING NUMBER: DM100233441	

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SEQ DWG DM100262890
REF: DM100220685
DM100215485

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District IV

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 27739

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 27739
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	6/23/2021
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	6/23/2021