Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

WELL API NO. 30-015-54318

5. Indicate Type of Lease STATE [X] FEE [ ]

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name: KLONDIKE 9 STATE COM

1. Type of Well: Oil Well [X] Gas Well [ ] Other

8. Well Number 133H

2. Name of Operator: PERMIAN RESOURCES OPERATING, LLC

9. OGRID Number: 372165

3. Address of Operator: 300 N MARIENFELD STREET SUITE 1000, MIDLAND, TX 79701

10. Pool name or Wildcat: [97569] WINCHESTER; BONE SPRING, WEST

4. Well Location
Unit Letter I : 1473 feet from the S line and 458 feet from the E line
Section 9 Township 19S Range 28E NMPM County Eddy

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*: 3,540.0' GL

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	[ ]	PLUG AND ABANDON	[ ]	REMEDIAL WORK	[ ]	ALTERING CASING	[ ]
TEMPORARILY ABANDON	[ ]	CHANGE PLANS	[X]	COMMENCE DRILLING OPNS.	[ ]	P AND A	[ ]
PULL OR ALTER CASING	[ ]	MULTIPLE COMPL	[ ]	CASING/CEMENT JOB	[ ]		
DOWNHOLE COMMINGLE	[ ]						
CLOSED-LOOP SYSTEM	[ ]						
OTHER:	[ ]			OTHER:			[ ]

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Permian Resources Operating, LLC would like to request the following changes to this APD:

Proposed SHL from I-9-19S-28E 1506' FSL & 458' FEL to 1473' FSL & 458' FEL.
Proposed FTP from 990' FSL & 100' FEL to 2301' FSL & 100' FEL.
Proposed LTP from 990' FSL & 100' FWL to 2301' FSL & 100' FWL.
Proposed BHL from M-8-19S-28E 990' FSL & 10' FWL to 2301' FSL & 10' FWL.

TD change from 18781'MD/8621'TVD to 18660'MD/8600'TVD.

Casing/Cement design per the attached drilling program.

Permian Resources also requests the following drilling program variances:
Multi-Well Pad Batch Drilling
Flexhose
Offline Cementing
BOP Break Testing

Spud Date: 7/1/2024 Rig Release Date: 7/19/2024

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Ashley Brown TITLE Regulatory Lead DATE 6/20/2024

Type or print name Ashley Brown E-mail address: ashley.brown@permianres.com PHONE: 432-400-2972

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____
Conditions of Approval (if any):

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-54318	[97569]	WINCHESTER; BONE SPRING, WEST

[4] Property Code	[5] Property Name	[6] Well Number
334778	KLONDIKE 9 STATE COM	133H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372165	PERMIAN RESOURCES OPERATING, LLC	3540.0'

[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
I	9	19S	28E		1473	SOUTH	458	EAST	EDDY

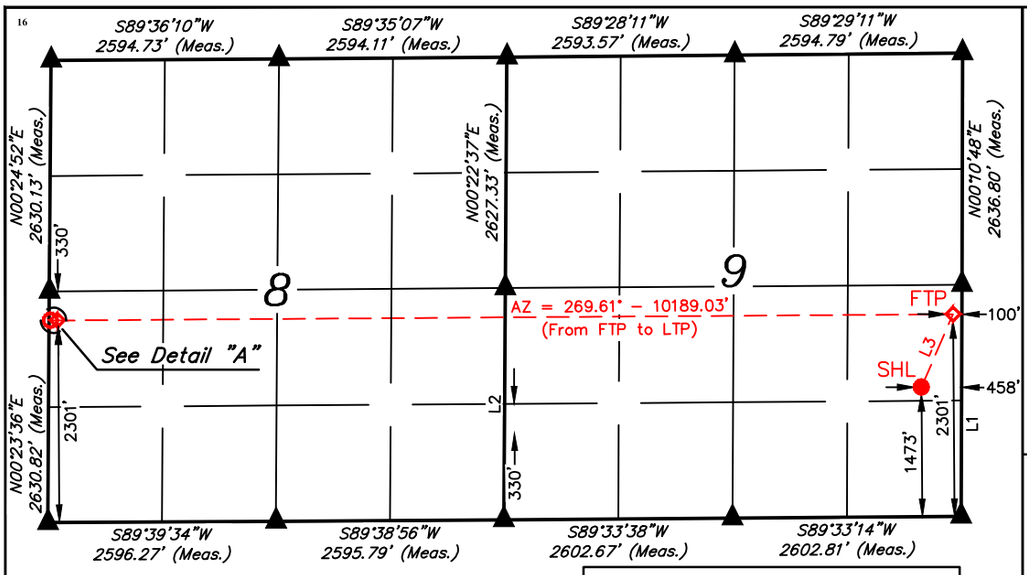
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	8	19S	28E		2301	SOUTH	10	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320.00			

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

[16]



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N00°10'55"E	2636.52'
L2	N00°21'33"E	2639.02'

WELL BORE LINE TABLE		
LINE	DIRECTION	LENGTH
L3	AZ = 23.46°	905.56'
L4	AZ = 269.66°	90.01'

[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.

Signature 6/20/2024 Date

Ashley Brown, Regulatory Lead
Printed Name

ashley.brown@permianres.com
E-mail Address

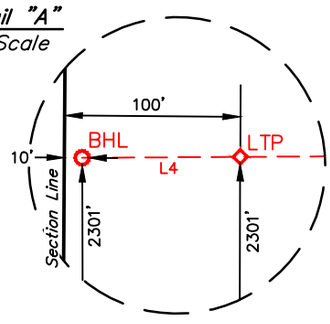
[18] SURVEYOR CERTIFICATION

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.

July 10, 2023
Date of Survey
Signature and Seal of Professional Surveyor:

Certificate Number:

Detail "A"
No Scale



NAD 83 (SURFACE HOLE LOCATION)	NAD 83 (FIRST TAKE POINT)
LATITUDE = 32°40'19.03" (32.671953°)	LATITUDE = 32°40'27.26" (32.674238°)
LONGITUDE = -104°10'26.61" (-104.174059°)	LONGITUDE = -104°10'22.42" (-104.172895°)
NAD 27 (SURFACE HOLE LOCATION)	**NAD 27 (FIRST TAKE POINT)**
LATITUDE = 32°40'18.61" (32.671836°)	LATITUDE = 32°40'26.84" (32.674122°)
LONGITUDE = -104°10'24.78" (-104.173550°)	LONGITUDE = -104°10'20.59" (-104.172386°)
STATE PLANE NAD 83 (N.M. EAST)	**STATE PLANE NAD 83 (N.M. EAST)**
N: 608224.27' E: 590347.17'	N: 609056.30' E: 590704.10'
STATE PLANE NAD 27 (N.M. EAST)	**STATE PLANE NAD 27 (N.M. EAST)**
N: 608162.10' E: 549167.50'	N: 608994.11' E: 549524.44'

NAD 83 (LAST TAKE POINT)	NAD 83 (BOTTOM HOLE LOCATION)
LATITUDE = 32°40'26.27" (32.673965°)	LATITUDE = 32°40'26.26" (32.673962°)
LONGITUDE = -104°12'21.60" (-104.205999°)	LONGITUDE = -104°12'22.65" (-104.206292°)
NAD 27 (LAST TAKE POINT)	**NAD 27 (BOTTOM HOLE LOCATION)**
LATITUDE = 32°40'25.85" (32.673848°)	LATITUDE = 32°40'25.85" (32.673846°)
LONGITUDE = -104°12'19.76" (-104.205489°)	LONGITUDE = -104°12'20.81" (-104.205782°)
STATE PLANE NAD 83 (N.M. EAST)	**STATE PLANE NAD 83 (N.M. EAST)**
N: 608942.94' E: 580518.05'	N: 608942.03' E: 580428.07'
STATE PLANE NAD 27 (N.M. EAST)	**STATE PLANE NAD 27 (N.M. EAST)**
N: 608880.83' E: 539338.39'	N: 608879.91' E: 539248.41'

NOTE:
- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

● = SURFACE HOLE LOCATION.
◇ = TAKE POINT.
○ = BOTTOM HOLE LOCATION.
▲ = SECTION CORNER LOCATED.

DRAWN BY: N.D.T. 07-20-23
REV: 3 06-14-24 D.M.C.
(SHL MOVE &
UPDATE WELLBORE PATH)

Intent [X] As Drilled [ ]

API #
30-015-54318

Operator Name:	Property Name:	Well Number
PERMIAN RESOURCES OPERATING, LLC	KLONDIKE 9 STATE COM	133H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
I	9	19S	28E		1473	S	458	E	EDDY

Latitude	Longitude	NAD
32°40'19.03" (32.671953°)	-104°10'26.61" (-104.174059°)	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
I	9	19S	28E		2301	S	100	E	EDDY

Latitude	Longitude	NAD
32°40'27.26" (32.674238°)	-104°10'22.42" (-104.172895°)	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
L	8	19S	28E		2301	S	100	W	EDDY

Latitude	Longitude	NAD
32°40'26.27" (32.673965°)	-104°12'21.60" (-104.205999°)	83

Is this well the defining well for the Horizontal Spacing Unit? [X]

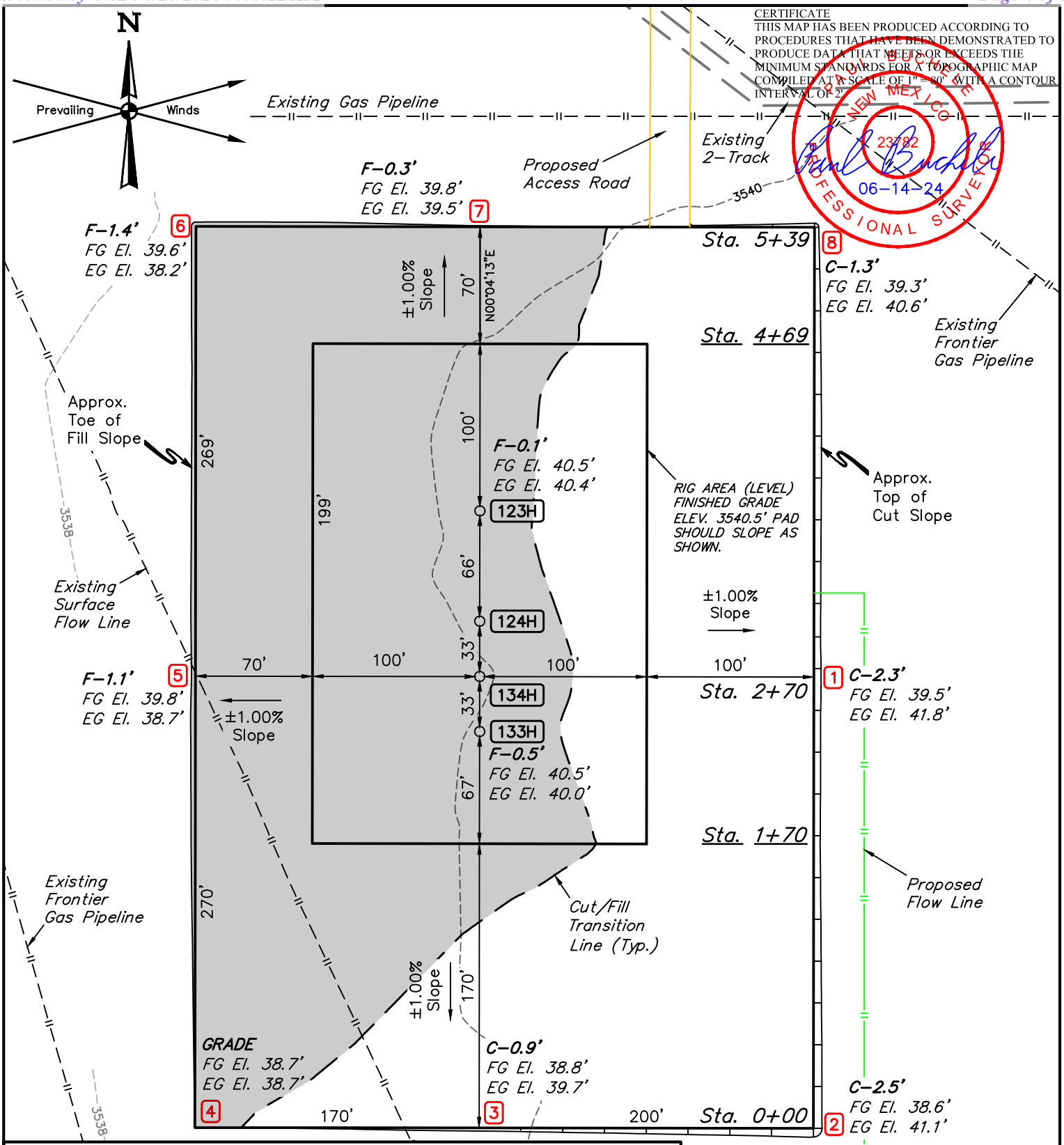
Is this well an infill well? [ ]

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018



NOTE: Earthwork Calculations Require a Fill @ the Location Stakes For Balance. All Fill is to be Compacted to a Minimum of 95% of the Maximum Dry Density Obtained by AASHTO Method t-99.

REV: 3 06-14-24 D.M.C. (MOVE 133H)

NOTES:

- Contours shown at 2' intervals.
- Cut/Fill Slopes 2:1 (Typ.)
- Underground utilities shown on this sheet are for visualization purposes only, actual locations to be determined prior to construction.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

PERMIAN RESOURCES OPERATING, LLC

KLONDIKE 9 STATE COM NESE 1
NE 1/4 SE 1/4, SECTION 9, T19S, R28E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

SURVEYED BY	R.C.	07-10-23	SCALE
DRAWN BY	Z.L.	07-12-23	1" = 80'

LOCATION LAYOUT

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

NEW MEXICO

(SP) EDDY
KLONDIKE
Klondike 9 State Com 133H

OWB

Plan: PRELIM #1

Standard Planning Report - Geographic

18 June, 2024

Permian Resources

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well Klondike 9 State Com 133H
Company:	NEW MEXICO	**TVD Reference:**	kb @ 3566.0usft
Project:	(SP) EDDY	**MD Reference:**	kb @ 3566.0usft
Site:	KLONDIKE	**North Reference:**	Grid
Well:	Klondike 9 State Com 133H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM #1		

Project (SP) EDDY

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site KLONDIKE

Site Position:		**Northing:**	608,290.26 usft	**Latitude:**	32° 40' 19.683 N
From:	Map	**Easting:**	590,346.97 usft	**Longitude:**	104° 10' 26.614 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well Klondike 9 State Com 133H

Well Position	**+N/-S**	0.0 usft	**Northing:**	608,224.27 usft	**Latitude:**	32° 40' 19.030 N
	+E/-W	0.0 usft	**Easting:**	590,347.17 usft	**Longitude:**	104° 10' 26.613 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,540.0 usft
Grid Convergence:		0.09 °				

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	8.06	60.55	48,994.46053199

Design PRELIM #1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	273.96

Plan Survey Tool Program **Date** 6/18/2024

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	18,659.5	PRELIM #1 (OWB)	MWD OWSG_Rev2_ MWD - Star	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,600.0	12.00	25.82	2,595.6	56.4	27.3	2.00	2.00	0.00	25.82	
6,493.6	12.00	25.82	6,404.1	785.1	379.8	0.00	0.00	0.00	0.00	
7,093.6	0.00	0.00	6,999.8	841.4	407.1	2.00	-2.00	0.00	180.00	
8,216.8	0.00	0.00	8,123.0	841.4	407.1	0.00	0.00	0.00	0.00	
8,966.9	90.00	269.07	8,600.5	833.7	-70.3	12.00	12.00	-12.12	269.07	
18,659.5	90.00	269.07	8,600.0	676.0	-9,761.7	0.00	0.00	0.00	0.00	BHL-KLONDIKE 9

Permian Resources

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well Klondike 9 State Com 133H
Company:	NEW MEXICO	**TVD Reference:**	kb @ 3566.0usft
Project:	(SP) EDDY	**MD Reference:**	kb @ 3566.0usft
Site:	KLONDIKE	**North Reference:**	Grid
Well:	Klondike 9 State Com 133H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
100.0	0.00	0.00	100.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
200.0	0.00	0.00	200.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
300.0	0.00	0.00	300.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
400.0	0.00	0.00	400.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
500.0	0.00	0.00	500.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
600.0	0.00	0.00	600.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
700.0	0.00	0.00	700.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
800.0	0.00	0.00	800.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
900.0	0.00	0.00	900.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
1,100.0	0.00	0.00	1,100.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
1,200.0	0.00	0.00	1,200.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
1,300.0	0.00	0.00	1,300.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
1,500.0	0.00	0.00	1,500.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
1,600.0	0.00	0.00	1,600.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
1,700.0	0.00	0.00	1,700.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
1,800.0	0.00	0.00	1,800.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
1,900.0	0.00	0.00	1,900.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
2,000.0	0.00	0.00	2,000.0	0.0	0.0	608,224.27	590,347.17	32° 40' 19.030 N	104° 10' 26.613 W
Start Build 2.00									
2,100.0	2.00	25.82	2,100.0	1.6	0.8	608,225.84	590,347.93	32° 40' 19.045 N	104° 10' 26.604 W
2,200.0	4.00	25.82	2,199.8	6.3	3.0	608,230.56	590,350.21	32° 40' 19.092 N	104° 10' 26.577 W
2,300.0	6.00	25.82	2,299.5	14.1	6.8	608,238.40	590,354.01	32° 40' 19.170 N	104° 10' 26.533 W
2,400.0	8.00	25.82	2,398.7	25.1	12.1	608,249.37	590,359.32	32° 40' 19.278 N	104° 10' 26.470 W
2,500.0	10.00	25.82	2,497.5	39.2	19.0	608,263.45	590,366.13	32° 40' 19.417 N	104° 10' 26.390 W
2,600.0	12.00	25.82	2,595.6	56.4	27.3	608,280.63	590,374.44	32° 40' 19.587 N	104° 10' 26.293 W
Start 3893.6 hold at 2600.0 MD									
2,700.0	12.00	25.82	2,693.4	75.1	36.3	608,299.34	590,383.49	32° 40' 19.772 N	104° 10' 26.187 W
2,800.0	12.00	25.82	2,791.3	93.8	45.4	608,318.06	590,392.55	32° 40' 19.957 N	104° 10' 26.080 W
2,900.0	12.00	25.82	2,889.1	112.5	54.4	608,336.77	590,401.60	32° 40' 20.142 N	104° 10' 25.974 W
3,000.0	12.00	25.82	2,986.9	131.2	63.5	608,355.49	590,410.66	32° 40' 20.327 N	104° 10' 25.868 W
3,100.0	12.00	25.82	3,084.7	149.9	72.5	608,374.21	590,419.71	32° 40' 20.512 N	104° 10' 25.761 W
3,200.0	12.00	25.82	3,182.5	168.6	81.6	608,392.92	590,428.77	32° 40' 20.698 N	104° 10' 25.655 W
3,300.0	12.00	25.82	3,280.3	187.4	90.7	608,411.64	590,437.82	32° 40' 20.883 N	104° 10' 25.549 W
3,400.0	12.00	25.82	3,378.1	206.1	99.7	608,430.35	590,446.88	32° 40' 21.068 N	104° 10' 25.443 W
3,500.0	12.00	25.82	3,476.0	224.8	108.8	608,449.07	590,455.93	32° 40' 21.253 N	104° 10' 25.336 W
3,600.0	12.00	25.82	3,573.8	243.5	117.8	608,467.78	590,464.99	32° 40' 21.438 N	104° 10' 25.230 W
3,700.0	12.00	25.82	3,671.6	262.2	126.9	608,486.50	590,474.04	32° 40' 21.623 N	104° 10' 25.124 W
3,800.0	12.00	25.82	3,769.4	280.9	135.9	608,505.22	590,483.10	32° 40' 21.808 N	104° 10' 25.018 W
3,900.0	12.00	25.82	3,867.2	299.7	145.0	608,523.93	590,492.15	32° 40' 21.993 N	104° 10' 24.911 W
4,000.0	12.00	25.82	3,965.0	318.4	154.0	608,542.65	590,501.21	32° 40' 22.178 N	104° 10' 24.805 W
4,100.0	12.00	25.82	4,062.8	337.1	163.1	608,561.36	590,510.27	32° 40' 22.363 N	104° 10' 24.699 W
4,200.0	12.00	25.82	4,160.7	355.8	172.1	608,580.08	590,519.32	32° 40' 22.548 N	104° 10' 24.592 W
4,300.0	12.00	25.82	4,258.5	374.5	181.2	608,598.79	590,528.38	32° 40' 22.733 N	104° 10' 24.486 W
4,400.0	12.00	25.82	4,356.3	393.2	190.3	608,617.51	590,537.43	32° 40' 22.918 N	104° 10' 24.380 W
4,500.0	12.00	25.82	4,454.1	412.0	199.3	608,636.23	590,546.49	32° 40' 23.103 N	104° 10' 24.274 W
4,600.0	12.00	25.82	4,551.9	430.7	208.4	608,654.94	590,555.54	32° 40' 23.288 N	104° 10' 24.167 W
4,700.0	12.00	25.82	4,649.7	449.4	217.4	608,673.66	590,564.60	32° 40' 23.473 N	104° 10' 24.061 W
4,800.0	12.00	25.82	4,747.5	468.1	226.5	608,692.37	590,573.65	32° 40' 23.659 N	104° 10' 23.955 W
4,900.0	12.00	25.82	4,845.4	486.8	235.5	608,711.09	590,582.71	32° 40' 23.844 N	104° 10' 23.849 W
5,000.0	12.00	25.82	4,943.2	505.5	244.6	608,729.80	590,591.76	32° 40' 24.029 N	104° 10' 23.742 W
5,100.0	12.00	25.82	5,041.0	524.2	253.6	608,748.52	590,600.82	32° 40' 24.214 N	104° 10' 23.636 W

Permian Resources

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well Klondike 9 State Com 133H
Company:	NEW MEXICO	**TVD Reference:**	kb @ 3566.0usft
Project:	(SP) EDDY	**MD Reference:**	kb @ 3566.0usft
Site:	KLONDIKE	**North Reference:**	Grid
Well:	Klondike 9 State Com 133H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,200.0	12.00	25.82	5,138.8	543.0	262.7	608,767.24	590,609.87	32° 40' 24.399 N	104° 10' 23.530 W
5,300.0	12.00	25.82	5,236.6	561.7	271.8	608,785.95	590,618.93	32° 40' 24.584 N	104° 10' 23.423 W
5,400.0	12.00	25.82	5,334.4	580.4	280.8	608,804.67	590,627.98	32° 40' 24.769 N	104° 10' 23.317 W
5,500.0	12.00	25.82	5,432.3	599.1	289.9	608,823.38	590,637.04	32° 40' 24.954 N	104° 10' 23.211 W
5,600.0	12.00	25.82	5,530.1	617.8	298.9	608,842.10	590,646.09	32° 40' 25.139 N	104° 10' 23.105 W
5,700.0	12.00	25.82	5,627.9	636.5	308.0	608,860.81	590,655.15	32° 40' 25.324 N	104° 10' 22.998 W
5,800.0	12.00	25.82	5,725.7	655.3	317.0	608,879.53	590,664.20	32° 40' 25.509 N	104° 10' 22.892 W
5,900.0	12.00	25.82	5,823.5	674.0	326.1	608,898.24	590,673.26	32° 40' 25.694 N	104° 10' 22.786 W
6,000.0	12.00	25.82	5,921.3	692.7	335.1	608,916.96	590,682.31	32° 40' 25.879 N	104° 10' 22.680 W
6,100.0	12.00	25.82	6,019.1	711.4	344.2	608,935.68	590,691.37	32° 40' 26.064 N	104° 10' 22.573 W
6,200.0	12.00	25.82	6,117.0	730.1	353.2	608,954.39	590,700.42	32° 40' 26.249 N	104° 10' 22.467 W
6,300.0	12.00	25.82	6,214.8	748.8	362.3	608,973.11	590,709.48	32° 40' 26.434 N	104° 10' 22.361 W
6,400.0	12.00	25.82	6,312.6	767.5	371.4	608,991.82	590,718.53	32° 40' 26.620 N	104° 10' 22.254 W
6,493.6	12.00	25.82	6,404.1	785.1	379.8	609,009.34	590,727.01	32° 40' 26.793 N	104° 10' 22.155 W
Start Drop -2.00									
6,500.0	11.87	25.82	6,410.4	786.3	380.4	609,010.53	590,727.59	32° 40' 26.805 N	104° 10' 22.148 W
6,600.0	9.87	25.82	6,508.6	803.2	388.6	609,027.51	590,735.80	32° 40' 26.972 N	104° 10' 22.052 W
6,700.0	7.87	25.82	6,607.4	817.1	395.3	609,041.39	590,742.52	32° 40' 27.110 N	104° 10' 21.973 W
6,800.0	5.87	25.82	6,706.7	827.9	400.6	609,052.16	590,747.73	32° 40' 27.216 N	104° 10' 21.912 W
6,900.0	3.87	25.82	6,806.3	835.5	404.3	609,059.81	590,751.43	32° 40' 27.292 N	104° 10' 21.868 W
7,000.0	1.87	25.82	6,906.2	840.0	406.4	609,064.32	590,753.61	32° 40' 27.336 N	104° 10' 21.843 W
7,093.6	0.00	0.00	6,999.8	841.4	407.1	609,065.69	590,754.27	32° 40' 27.350 N	104° 10' 21.835 W
Start 1123.2 hold at 7093.6 MD									
7,100.0	0.00	0.00	7,006.2	841.4	407.1	609,065.69	590,754.27	32° 40' 27.350 N	104° 10' 21.835 W
7,200.0	0.00	0.00	7,106.2	841.4	407.1	609,065.69	590,754.27	32° 40' 27.350 N	104° 10' 21.835 W
7,300.0	0.00	0.00	7,206.2	841.4	407.1	609,065.69	590,754.27	32° 40' 27.350 N	104° 10' 21.835 W
7,400.0	0.00	0.00	7,306.2	841.4	407.1	609,065.69	590,754.27	32° 40' 27.350 N	104° 10' 21.835 W
7,500.0	0.00	0.00	7,406.2	841.4	407.1	609,065.69	590,754.27	32° 40' 27.350 N	104° 10' 21.835 W
7,600.0	0.00	0.00	7,506.2	841.4	407.1	609,065.69	590,754.27	32° 40' 27.350 N	104° 10' 21.835 W
7,700.0	0.00	0.00	7,606.2	841.4	407.1	609,065.69	590,754.27	32° 40' 27.350 N	104° 10' 21.835 W
7,800.0	0.00	0.00	7,706.2	841.4	407.1	609,065.69	590,754.27	32° 40' 27.350 N	104° 10' 21.835 W
7,900.0	0.00	0.00	7,806.2	841.4	407.1	609,065.69	590,754.27	32° 40' 27.350 N	104° 10' 21.835 W
8,000.0	0.00	0.00	7,906.2	841.4	407.1	609,065.69	590,754.27	32° 40' 27.350 N	104° 10' 21.835 W
8,100.0	0.00	0.00	8,006.2	841.4	407.1	609,065.69	590,754.27	32° 40' 27.350 N	104° 10' 21.835 W
8,200.0	0.00	0.00	8,106.2	841.4	407.1	609,065.69	590,754.27	32° 40' 27.350 N	104° 10' 21.835 W
8,216.8	0.00	0.00	8,123.0	841.4	407.1	609,065.69	590,754.27	32° 40' 27.350 N	104° 10' 21.835 W
Start DLS 12.00 TFO 269.07									
8,225.0	0.98	269.07	8,131.2	841.4	407.0	609,065.69	590,754.20	32° 40' 27.350 N	104° 10' 21.836 W
8,250.0	3.98	269.07	8,156.1	841.4	405.9	609,065.67	590,753.12	32° 40' 27.350 N	104° 10' 21.848 W
8,275.0	6.98	269.07	8,181.0	841.4	403.6	609,065.64	590,750.74	32° 40' 27.349 N	104° 10' 21.876 W
8,300.0	9.98	269.07	8,205.7	841.3	399.9	609,065.58	590,747.05	32° 40' 27.349 N	104° 10' 21.920 W
8,325.0	12.98	269.07	8,230.2	841.2	394.9	609,065.50	590,742.08	32° 40' 27.348 N	104° 10' 21.978 W
8,350.0	15.98	269.07	8,254.4	841.1	388.7	609,065.39	590,735.83	32° 40' 27.347 N	104° 10' 22.051 W
8,375.0	18.98	269.07	8,278.3	841.0	381.1	609,065.27	590,728.32	32° 40' 27.346 N	104° 10' 22.139 W
8,400.0	21.98	269.07	8,301.7	840.9	372.4	609,065.13	590,719.57	32° 40' 27.345 N	104° 10' 22.241 W
8,425.0	24.98	269.07	8,324.6	840.7	362.4	609,064.97	590,709.62	32° 40' 27.343 N	104° 10' 22.358 W
8,450.0	27.98	269.07	8,347.0	840.5	351.3	609,064.79	590,698.47	32° 40' 27.342 N	104° 10' 22.488 W
8,475.0	30.98	269.07	8,368.8	840.3	339.0	609,064.59	590,686.17	32° 40' 27.340 N	104° 10' 22.632 W
8,500.0	33.98	269.07	8,389.9	840.1	325.6	609,064.37	590,672.75	32° 40' 27.338 N	104° 10' 22.789 W
8,525.0	36.98	269.07	8,410.2	839.9	311.1	609,064.13	590,658.24	32° 40' 27.336 N	104° 10' 22.959 W
8,550.0	39.98	269.07	8,429.8	839.6	295.5	609,063.88	590,642.69	32° 40' 27.334 N	104° 10' 23.141 W
8,575.0	42.98	269.07	8,448.5	839.3	279.0	609,063.61	590,626.14	32° 40' 27.331 N	104° 10' 23.334 W
8,600.0	45.98	269.07	8,466.3	839.1	261.5	609,063.32	590,608.63	32° 40' 27.329 N	104° 10' 23.539 W
8,625.0	48.98	269.07	8,483.2	838.8	243.0	609,063.03	590,590.20	32° 40' 27.326 N	104° 10' 23.755 W

Permian Resources

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well Klondike 9 State Com 133H
Company:	NEW MEXICO	**TVD Reference:**	kb @ 3566.0usft
Project:	(SP) EDDY	**MD Reference:**	kb @ 3566.0usft
Site:	KLONDIKE	**North Reference:**	Grid
Well:	Klondike 9 State Com 133H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,650.0	51.98	269.07	8,499.1	838.4	223.8	609,062.71	590,570.92	32° 40' 27.323 N	104° 10' 23.980 W
8,675.0	54.98	269.07	8,514.0	838.1	203.7	609,062.38	590,550.84	32° 40' 27.320 N	104° 10' 24.215 W
8,700.0	57.98	269.07	8,527.8	837.8	182.8	609,062.05	590,530.00	32° 40' 27.317 N	104° 10' 24.459 W
8,725.0	60.98	269.07	8,540.5	837.4	161.3	609,061.70	590,508.47	32° 40' 27.314 N	104° 10' 24.711 W
8,750.0	63.98	269.07	8,552.1	837.1	139.1	609,061.34	590,486.30	32° 40' 27.311 N	104° 10' 24.970 W
8,775.0	66.98	269.07	8,562.4	836.7	116.4	609,060.97	590,463.57	32° 40' 27.308 N	104° 10' 25.236 W
8,800.0	69.98	269.07	8,571.6	836.3	93.1	609,060.59	590,440.31	32° 40' 27.304 N	104° 10' 25.508 W
8,825.0	72.98	269.07	8,579.6	835.9	69.4	609,060.20	590,416.61	32° 40' 27.301 N	104° 10' 25.786 W
8,850.0	75.98	269.07	8,586.2	835.5	45.4	609,059.81	590,392.53	32° 40' 27.297 N	104° 10' 26.067 W
8,875.0	78.98	269.07	8,591.7	835.1	21.0	609,059.41	590,368.13	32° 40' 27.294 N	104° 10' 26.353 W
8,900.0	81.98	269.07	8,595.8	834.7	-3.7	609,059.01	590,343.48	32° 40' 27.290 N	104° 10' 26.641 W
8,925.0	84.98	269.07	8,598.6	834.3	-28.5	609,058.61	590,318.65	32° 40' 27.286 N	104° 10' 26.932 W
8,950.0	87.98	269.07	8,600.2	833.9	-53.5	609,058.20	590,293.70	32° 40' 27.283 N	104° 10' 27.224 W
8,966.9	90.00	269.07	8,600.5	833.7	-70.3	609,057.93	590,276.85	32° 40' 27.280 N	104° 10' 27.421 W
Start 9692.7 hold at 8966.9 MD									
9,000.0	90.00	269.07	8,600.5	833.1	-103.5	609,057.39	590,243.71	32° 40' 27.275 N	104° 10' 27.809 W
9,100.0	90.00	269.07	8,600.5	831.5	-203.4	609,055.76	590,143.73	32° 40' 27.261 N	104° 10' 28.978 W
9,200.0	90.00	269.07	8,600.5	829.9	-303.4	609,054.14	590,043.74	32° 40' 27.246 N	104° 10' 30.148 W
9,300.0	90.00	269.07	8,600.4	828.2	-403.4	609,052.51	589,943.75	32° 40' 27.232 N	104° 10' 31.318 W
9,400.0	90.00	269.07	8,600.4	826.6	-503.4	609,050.88	589,843.77	32° 40' 27.217 N	104° 10' 32.488 W
9,500.0	90.00	269.07	8,600.4	825.0	-603.4	609,049.26	589,743.78	32° 40' 27.202 N	104° 10' 33.658 W
9,600.0	90.00	269.07	8,600.4	823.4	-703.4	609,047.63	589,643.79	32° 40' 27.188 N	104° 10' 34.828 W
9,700.0	90.00	269.07	8,600.4	821.7	-803.4	609,046.01	589,543.81	32° 40' 27.173 N	104° 10' 35.998 W
9,800.0	90.00	269.07	8,600.4	820.1	-903.4	609,044.38	589,443.82	32° 40' 27.158 N	104° 10' 37.167 W
9,900.0	90.00	269.07	8,600.4	818.5	-1,003.3	609,042.75	589,343.83	32° 40' 27.144 N	104° 10' 38.337 W
10,000.0	90.00	269.07	8,600.4	816.9	-1,103.3	609,041.13	589,243.85	32° 40' 27.129 N	104° 10' 39.507 W
10,100.0	90.00	269.07	8,600.4	815.2	-1,203.3	609,039.50	589,143.86	32° 40' 27.115 N	104° 10' 40.677 W
10,200.0	90.00	269.07	8,600.4	813.6	-1,303.3	609,037.88	589,043.87	32° 40' 27.100 N	104° 10' 41.847 W
10,300.0	90.00	269.07	8,600.4	812.0	-1,403.3	609,036.25	588,943.89	32° 40' 27.085 N	104° 10' 43.017 W
10,400.0	90.00	269.07	8,600.4	810.3	-1,503.3	609,034.62	588,843.90	32° 40' 27.071 N	104° 10' 44.186 W
10,500.0	90.00	269.07	8,600.4	808.7	-1,603.3	609,033.00	588,743.91	32° 40' 27.056 N	104° 10' 45.356 W
10,600.0	90.00	269.07	8,600.4	807.1	-1,703.2	609,031.37	588,643.93	32° 40' 27.041 N	104° 10' 46.526 W
10,700.0	90.00	269.07	8,600.4	805.5	-1,803.2	609,029.74	588,543.94	32° 40' 27.027 N	104° 10' 47.696 W
10,800.0	90.00	269.07	8,600.4	803.8	-1,903.2	609,028.12	588,443.95	32° 40' 27.012 N	104° 10' 48.866 W
10,900.0	90.00	269.07	8,600.4	802.2	-2,003.2	609,026.49	588,343.97	32° 40' 26.997 N	104° 10' 50.036 W
11,000.0	90.00	269.07	8,600.4	800.6	-2,103.2	609,024.87	588,243.98	32° 40' 26.983 N	104° 10' 51.205 W
11,100.0	90.00	269.07	8,600.4	799.0	-2,203.2	609,023.24	588,143.99	32° 40' 26.968 N	104° 10' 52.375 W
11,200.0	90.00	269.07	8,600.4	797.3	-2,303.2	609,021.61	588,044.00	32° 40' 26.953 N	104° 10' 53.545 W
11,300.0	90.00	269.07	8,600.4	795.7	-2,403.2	609,019.99	587,944.02	32° 40' 26.939 N	104° 10' 54.715 W
11,400.0	90.00	269.07	8,600.3	794.1	-2,503.1	609,018.36	587,844.03	32° 40' 26.924 N	104° 10' 55.885 W
11,500.0	90.00	269.07	8,600.3	792.5	-2,603.1	609,016.73	587,744.04	32° 40' 26.909 N	104° 10' 57.055 W
11,600.0	90.00	269.07	8,600.3	790.8	-2,703.1	609,015.11	587,644.06	32° 40' 26.895 N	104° 10' 58.225 W
11,700.0	90.00	269.07	8,600.3	789.2	-2,803.1	609,013.48	587,544.07	32° 40' 26.880 N	104° 10' 59.394 W
11,800.0	90.00	269.07	8,600.3	787.6	-2,903.1	609,011.86	587,444.08	32° 40' 26.865 N	104° 11' 0.564 W
11,900.0	90.00	269.07	8,600.3	786.0	-3,003.1	609,010.23	587,344.10	32° 40' 26.850 N	104° 11' 1.734 W
12,000.0	90.00	269.07	8,600.3	784.3	-3,103.1	609,008.60	587,244.11	32° 40' 26.836 N	104° 11' 2.904 W
12,100.0	90.00	269.07	8,600.3	782.7	-3,203.0	609,006.98	587,144.12	32° 40' 26.821 N	104° 11' 4.074 W
12,200.0	90.00	269.07	8,600.3	781.1	-3,303.0	609,005.35	587,044.14	32° 40' 26.806 N	104° 11' 5.244 W
12,300.0	90.00	269.07	8,600.3	779.5	-3,403.0	609,003.72	586,944.15	32° 40' 26.792 N	104° 11' 6.413 W
12,400.0	90.00	269.07	8,600.3	777.8	-3,503.0	609,002.10	586,844.16	32° 40' 26.777 N	104° 11' 7.583 W
12,500.0	90.00	269.07	8,600.3	776.2	-3,603.0	609,000.47	586,744.18	32° 40' 26.762 N	104° 11' 8.753 W
12,600.0	90.00	269.07	8,600.3	774.6	-3,703.0	608,998.85	586,644.19	32° 40' 26.747 N	104° 11' 9.923 W
12,700.0	90.00	269.07	8,600.3	772.9	-3,803.0	608,997.22	586,544.20	32° 40' 26.733 N	104° 11' 11.093 W
12,800.0	90.00	269.07	8,600.3	771.3	-3,903.0	608,995.59	586,444.22	32° 40' 26.718 N	104° 11' 12.263 W

Permian Resources

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well Klondike 9 State Com 133H
Company:	NEW MEXICO	**TVD Reference:**	kb @ 3566.0usft
Project:	(SP) EDDY	**MD Reference:**	kb @ 3566.0usft
Site:	KLONDIKE	**North Reference:**	Grid
Well:	Klondike 9 State Com 133H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
12,900.0	90.00	269.07	8,600.3	769.7	-4,002.9	608,993.97	586,344.23	32° 40' 26.703 N	104° 11' 13.433 W
13,000.0	90.00	269.07	8,600.3	768.1	-4,102.9	608,992.34	586,244.24	32° 40' 26.689 N	104° 11' 14.602 W
13,100.0	90.00	269.07	8,600.3	766.4	-4,202.9	608,990.72	586,144.26	32° 40' 26.674 N	104° 11' 15.772 W
13,200.0	90.00	269.07	8,600.3	764.8	-4,302.9	608,989.09	586,044.27	32° 40' 26.659 N	104° 11' 16.942 W
13,300.0	90.00	269.07	8,600.3	763.2	-4,402.9	608,987.46	585,944.28	32° 40' 26.644 N	104° 11' 18.112 W
13,400.0	90.00	269.07	8,600.3	761.6	-4,502.9	608,985.84	585,844.30	32° 40' 26.630 N	104° 11' 19.282 W
13,500.0	90.00	269.07	8,600.2	759.9	-4,602.9	608,984.21	585,744.31	32° 40' 26.615 N	104° 11' 20.452 W
13,600.0	90.00	269.07	8,600.2	758.3	-4,702.9	608,982.58	585,644.32	32° 40' 26.600 N	104° 11' 21.621 W
13,700.0	90.00	269.07	8,600.2	756.7	-4,802.8	608,980.96	585,544.34	32° 40' 26.585 N	104° 11' 22.791 W
13,800.0	90.00	269.07	8,600.2	755.1	-4,902.8	608,979.33	585,444.35	32° 40' 26.571 N	104° 11' 23.961 W
13,900.0	90.00	269.07	8,600.2	753.4	-5,002.8	608,977.71	585,344.36	32° 40' 26.556 N	104° 11' 25.131 W
14,000.0	90.00	269.07	8,600.2	751.8	-5,102.8	608,976.08	585,244.38	32° 40' 26.541 N	104° 11' 26.301 W
14,100.0	90.00	269.07	8,600.2	750.2	-5,202.8	608,974.45	585,144.39	32° 40' 26.526 N	104° 11' 27.471 W
14,200.0	90.00	269.07	8,600.2	748.6	-5,302.8	608,972.83	585,044.40	32° 40' 26.512 N	104° 11' 28.640 W
14,300.0	90.00	269.07	8,600.2	746.9	-5,402.8	608,971.20	584,944.41	32° 40' 26.497 N	104° 11' 29.810 W
14,400.0	90.00	269.07	8,600.2	745.3	-5,502.7	608,969.57	584,844.43	32° 40' 26.482 N	104° 11' 30.980 W
14,500.0	90.00	269.07	8,600.2	743.7	-5,602.7	608,967.95	584,744.44	32° 40' 26.467 N	104° 11' 32.150 W
14,600.0	90.00	269.07	8,600.2	742.0	-5,702.7	608,966.32	584,644.45	32° 40' 26.452 N	104° 11' 33.320 W
14,700.0	90.00	269.07	8,600.2	740.4	-5,802.7	608,964.70	584,544.47	32° 40' 26.438 N	104° 11' 34.490 W
14,800.0	90.00	269.07	8,600.2	738.8	-5,902.7	608,963.07	584,444.48	32° 40' 26.423 N	104° 11' 35.660 W
14,900.0	90.00	269.07	8,600.2	737.2	-6,002.7	608,961.44	584,344.49	32° 40' 26.408 N	104° 11' 36.829 W
15,000.0	90.00	269.07	8,600.2	735.5	-6,102.7	608,959.82	584,244.51	32° 40' 26.393 N	104° 11' 37.999 W
15,100.0	90.00	269.07	8,600.2	733.9	-6,202.7	608,958.19	584,144.52	32° 40' 26.379 N	104° 11' 39.169 W
15,200.0	90.00	269.07	8,600.2	732.3	-6,302.6	608,956.57	584,044.53	32° 40' 26.364 N	104° 11' 40.339 W
15,300.0	90.00	269.07	8,600.2	730.7	-6,402.6	608,954.94	583,944.55	32° 40' 26.349 N	104° 11' 41.509 W
15,400.0	90.00	269.07	8,600.2	729.0	-6,502.6	608,953.31	583,844.56	32° 40' 26.334 N	104° 11' 42.679 W
15,500.0	90.00	269.07	8,600.2	727.4	-6,602.6	608,951.69	583,744.57	32° 40' 26.319 N	104° 11' 43.848 W
15,600.0	90.00	269.07	8,600.1	725.8	-6,702.6	608,950.06	583,644.59	32° 40' 26.305 N	104° 11' 45.018 W
15,700.0	90.00	269.07	8,600.1	724.2	-6,802.6	608,948.43	583,544.60	32° 40' 26.290 N	104° 11' 46.188 W
15,800.0	90.00	269.07	8,600.1	722.5	-6,902.6	608,946.81	583,444.61	32° 40' 26.275 N	104° 11' 47.358 W
15,900.0	90.00	269.07	8,600.1	720.9	-7,002.5	608,945.18	583,344.63	32° 40' 26.260 N	104° 11' 48.528 W
16,000.0	90.00	269.07	8,600.1	719.3	-7,102.5	608,943.56	583,244.64	32° 40' 26.245 N	104° 11' 49.698 W
16,100.0	90.00	269.07	8,600.1	717.7	-7,202.5	608,941.93	583,144.65	32° 40' 26.230 N	104° 11' 50.867 W
16,200.0	90.00	269.07	8,600.1	716.0	-7,302.5	608,940.30	583,044.67	32° 40' 26.216 N	104° 11' 52.037 W
16,300.0	90.00	269.07	8,600.1	714.4	-7,402.5	608,938.68	582,944.68	32° 40' 26.201 N	104° 11' 53.207 W
16,400.0	90.00	269.07	8,600.1	712.8	-7,502.5	608,937.05	582,844.69	32° 40' 26.186 N	104° 11' 54.377 W
16,500.0	90.00	269.07	8,600.1	711.2	-7,602.5	608,935.42	582,744.71	32° 40' 26.171 N	104° 11' 55.547 W
16,600.0	90.00	269.07	8,600.1	709.5	-7,702.5	608,933.80	582,644.72	32° 40' 26.156 N	104° 11' 56.717 W
16,700.0	90.00	269.07	8,600.1	707.9	-7,802.4	608,932.17	582,544.73	32° 40' 26.141 N	104° 11' 57.887 W
16,800.0	90.00	269.07	8,600.1	706.3	-7,902.4	608,930.55	582,444.75	32° 40' 26.127 N	104° 11' 59.056 W
16,900.0	90.00	269.07	8,600.1	704.6	-8,002.4	608,928.92	582,344.76	32° 40' 26.112 N	104° 12' 0.226 W
17,000.0	90.00	269.07	8,600.1	703.0	-8,102.4	608,927.29	582,244.77	32° 40' 26.097 N	104° 12' 1.396 W
17,100.0	90.00	269.07	8,600.1	701.4	-8,202.4	608,925.67	582,144.78	32° 40' 26.082 N	104° 12' 2.566 W
17,200.0	90.00	269.07	8,600.1	699.8	-8,302.4	608,924.04	582,044.80	32° 40' 26.067 N	104° 12' 3.736 W
17,300.0	90.00	269.07	8,600.1	698.1	-8,402.4	608,922.41	581,944.81	32° 40' 26.052 N	104° 12' 4.906 W
17,400.0	90.00	269.07	8,600.1	696.5	-8,502.3	608,920.79	581,844.82	32° 40' 26.037 N	104° 12' 6.075 W
17,500.0	90.00	269.07	8,600.1	694.9	-8,602.3	608,919.16	581,744.84	32° 40' 26.023 N	104° 12' 7.245 W
17,600.0	90.00	269.07	8,600.1	693.3	-8,702.3	608,917.54	581,644.85	32° 40' 26.008 N	104° 12' 8.415 W
17,700.0	90.00	269.07	8,600.0	691.6	-8,802.3	608,915.91	581,544.86	32° 40' 25.993 N	104° 12' 9.585 W
17,800.0	90.00	269.07	8,600.0	690.0	-8,902.3	608,914.28	581,444.88	32° 40' 25.978 N	104° 12' 10.755 W
17,900.0	90.00	269.07	8,600.0	688.4	-9,002.3	608,912.66	581,344.89	32° 40' 25.963 N	104° 12' 11.925 W
18,000.0	90.00	269.07	8,600.0	686.8	-9,102.3	608,911.03	581,244.90	32° 40' 25.948 N	104° 12' 13.094 W
18,100.0	90.00	269.07	8,600.0	685.1	-9,202.3	608,909.41	581,144.92	32° 40' 25.933 N	104° 12' 14.264 W
18,200.0	90.00	269.07	8,600.0	683.5	-9,302.2	608,907.78	581,044.93	32° 40' 25.918 N	104° 12' 15.434 W
18,300.0	90.00	269.07	8,600.0	681.9	-9,402.2	608,906.15	580,944.94	32° 40' 25.904 N	104° 12' 16.604 W

Permian Resources

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well Klondike 9 State Com 133H
Company:	NEW MEXICO	**TVD Reference:**	kb @ 3566.0usft
Project:	(SP) EDDY	**MD Reference:**	kb @ 3566.0usft
Site:	KLONDIKE	**North Reference:**	Grid
Well:	Klondike 9 State Com 133H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
18,400.0	90.00	269.07	8,600.0	680.3	-9,502.2	608,904.53	580,844.96	32° 40' 25.889 N	104° 12' 17.774 W
18,500.0	90.00	269.07	8,600.0	678.6	-9,602.2	608,902.90	580,744.97	32° 40' 25.874 N	104° 12' 18.944 W
18,600.0	90.00	269.07	8,600.0	677.0	-9,702.2	608,901.27	580,644.98	32° 40' 25.859 N	104° 12' 20.113 W
18,659.5	90.00	269.07	8,600.0	676.0	-9,761.7	608,900.31	580,585.45	32° 40' 25.850 N	104° 12' 20.810 W
TD at 18659.5									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP-KLONDIKE 9 13 - plan misses target center by 163.1usft at 8620.1usft MD (8480.0 TVD, 838.8 N, 246.7 E) - Point	0.00	0.00	8,600.0	832.0	356.9	609,056.30	590,704.10	32° 40' 27.258 N	104° 10' 22.422 W
BHL-KLONDIKE 9 13 - plan hits target center - Point	0.00	0.00	8,600.0	676.0	-9,761.7	608,900.31	580,585.45	32° 40' 25.850 N	104° 12' 20.810 W
LTP-KLONDIKE 9 13 - plan misses target center by 1.4usft at 18569.8usft MD (8600.0 TVD, 677.5 N, -9672.0 E) - Point	0.00	0.00	8,600.0	676.1	-9,672.0	608,900.41	580,675.19	32° 40' 25.850 N	104° 12' 19.760 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,000.0	2,000.0	0.0	0.0	Start Build 2.00
2,600.0	2,595.6	56.4	27.3	Start 3893.6 hold at 2600.0 MD
6,493.6	6,404.1	785.1	379.8	Start Drop -2.00
7,093.6	6,999.8	841.4	407.1	Start 1123.2 hold at 7093.6 MD
8,216.8	8,123.0	841.4	407.1	Start DLS 12.00 TFO 269.07
8,966.9	8,600.5	833.7	-70.3	Start 9692.7 hold at 8966.9 MD
18,659.5	8,600.0	676.0	-9,761.7	TD at 18659.5

Permian Resources - Klondike 9 State Com 133H

1. Geologic Formations

Formation	Elevation	TVD	Lithology	Target
Rustler	-3429	141	Sandstone	No
Top of Salt	-3189	381	Salt	No
Tansill	-609	2961	Anhydrite/Shale	No
Yates	-2799	771	Anhydrite/Shale	No
Seven Rivers	-2429	1141	Limestone	No
Queen	-1899	1671	Limestone	No
Grayburg	-1564	2006	Limestone	No
San Andres	-1144	2426	Limestone	No
Cherry Canyon	-719	2851	Sandstone	No
Brushy Canyon	-624	2946	Sandstone	No
Bone Spring Lime	-224	3346	Limestone/Shale	No
1st Bone Spring Sand	2626	6196	Sandstone/Limestone/Shale	No
2nd Bone Spring Sand	3541	7111	Sandstone/Limestone/Shale	No
3rd Bone Spring Sand	-3570	0	Sandstone/Limestone/Shale	Yes
Wolfcamp	-3570	0	Shale	No

2. Blowout Prevention

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
12.25	13-5/8”	5M	Annular	x	2500 psi
			Blind Ram	x	5000 psi
			Pipe Ram	x	
			Double Ram		
			Other*		
8.75	13-5/8”	5M	Annular	x	2500 psi
			Blind Ram	x	5000 psi
			Pipe Ram	x	
			Double Ram		
			Other*		

Equipment: BOPE will meet all requirements for above listed system per 43 CFR 3172. BOPE with working pressure ratings in excess of anticipated maximum surface pressure will be utilized for well control from drill out of surface casing to TMD. The system may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all of the components installed will be functional, tested, and will meet all requirements per 43 CFR 3172. The wellhead will be a multibowl speed head allowing for hangoff of intermediate casing of the surface x intermedicate annulus without breaking the connection between the BOP & wellhead. A variance is requested to utilize a flexible choke line (flexhose) from the BOP to choke manifold.

Requesting Variance? YES
Variance request: Multibowl Wellhead, Flexhose, Breaktesting, Offline Cementing Variances. Attachments in Section 8.
Testing Procedure: Operator requests to ONLY test broken pressure seals per API Standard 53 and the attachments in Section 8. The BOP test shall be performed before drilling out of the surface casing shoe and will occur at a minimum: a. when initially installed, b. whenever any seal subject to test pressure is broken, c. following related repairs, d. at 21-day intervals. Testing of the ram type preventer(s) and annual type preventer(s) shall be tested per 43 CFR 3172. The BOPE configuration, choke manifold layout, and accumulator system will be in compliance with 43 CFR 3172. Bleed lines will discharge 100' from wellhead in non-H2S scenarios and 150' from wellhead in H2S scenarios.

Choke Diagram Attachemnt: 5 M Choke Manifold
BOP Diagram Attachment: BOP Schematic

3. Casing

String	Hole Size	Casing Size	Top	Bottom	Top TVD	Bottom TVD	Length	Grade	Weight	Connection	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
Surface	17.5	13.375	0	166	0	166	166	J55	54.5	BTC	13.78	4.59	Dry	8.34	Dry	7.82
Intermediate	12.25	9.625	0	2801	0	2801	2801	J55	36	BTC	2.66	1.59	Dry	3.18	Dry	2.81
Production	8.75	5.5	0	8217	0	8123	8217	P110RY	17	GeoConn	1.67	1.75	Dry	2.22	Dry	2.22
Production	7.875	5.5	8217	18660	8123	8600	10443	P110RY	17	GeoConn	1.67	1.75	Dry	2.22	Dry	2.22
								BLM Min Safety Factor			1.125	1		1.6		1.6

Non API casing spec sheets and casing design assumptions attached.

4. Cement

String	Lead/Tail	Top MD	Bottom MD	Quanity (sx)	Yield	Density	Cu Ft	Excess %	Cement Type	Additives
Surface	Tail	0	166	140	1.34	14.8	180	50%	Class C	Accelerator
Intermediate	Lead	0	2240	500	2.08	12.7	1040	50%	Class C	Salt, Extender, and LCM
Intermediate	Tail	2240	2801	210	1.34	14.8	270	50%	Class C	Accelerator
Production	Lead	2301	7094	690	2.41	11.5	1660	40%	Class H	POZ, Extender, Fluid Loss, Dispersant, Retarder
Production	Tail	7094	18660	1520	1.73	12.5	2620	25%	Class H	POZ, Extender, Fluid Loss, Dispersant, Retarder

5. Circulating Medium

Mud System Type: Closed
Will an air or gas system be used: No
Describe what will be on location to control well or mitigate oter conditions: Sufficient quantities of mud materials will be on the well site at all times for the purpose of assuring well control and maintaining wellbore integrity. Surface interval will employ fresh water mud. The intermediate hole will utilize a saturated brine fluid to inhibit salt washout. The production hole will employ brine based and oil base fluid to inhibit formation reactivity and of the appropriate density to maintain well control.

Describe the mud monitoring system utilized: Centrifuge separation system. Open tank monitoring with EDR will be used for drilling fluids and return volumes. Open tank monitoring will be used for cement and cuttings return volumes. Mud properties will be monitored at least every 24 hours using industry accepted

Cuttings Volume: 8230 Cu Ft

Circulating Medium Table

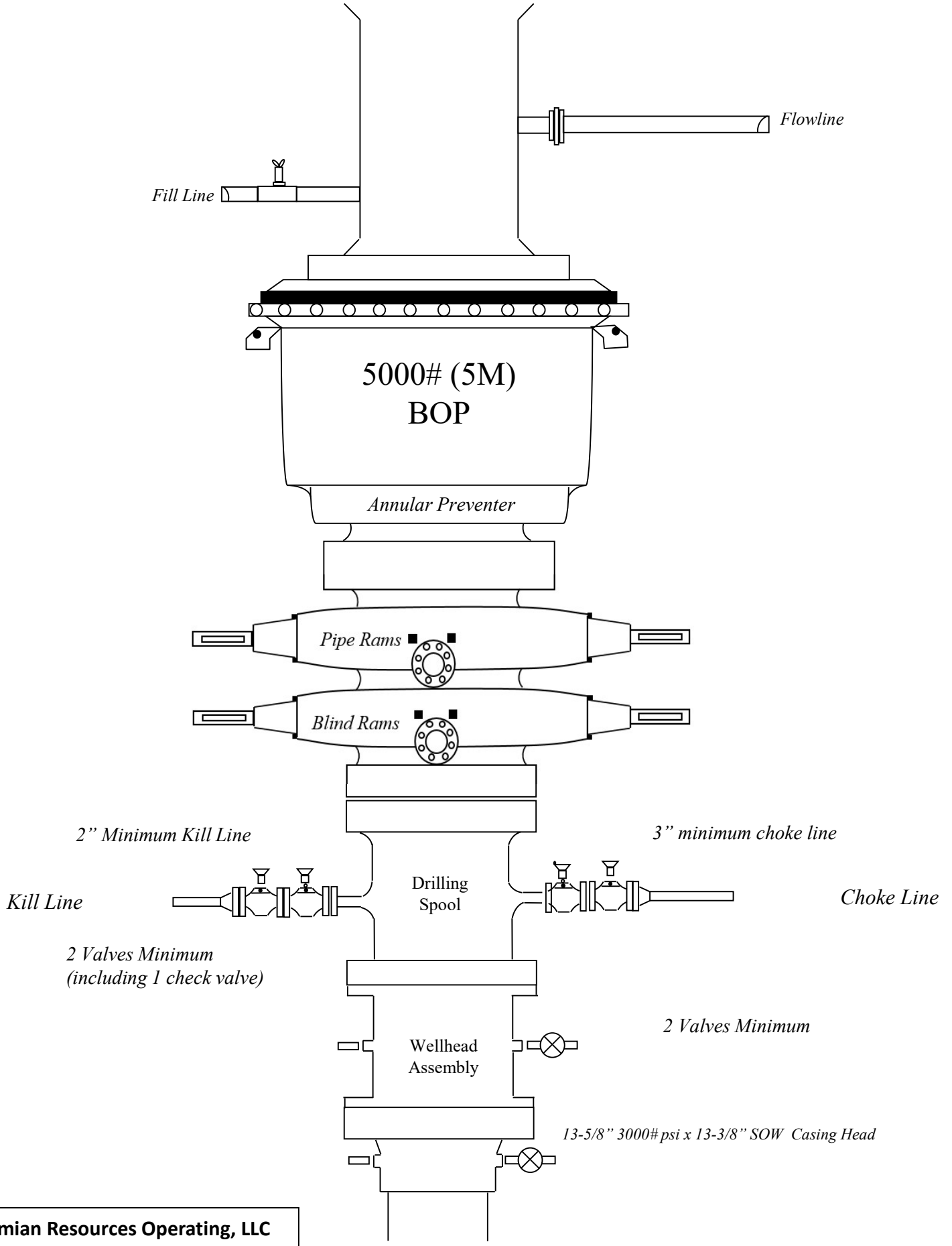
Top Depth	Bottom Depth	Mud Type	Min Weight	Max Weight
0	166	Spud Mud	8.6	9.5
166	2801	Salt Saturated	10	10
2801	19038	Oil Based Mud	9	10

6. Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:
Will utilize MWD/LWD from intermediate hole to TD of the well.
List of open and cased hole logs run in the well:
DIRECTIONAL SURVEY
Coring operation description for the well:

7. Pressure

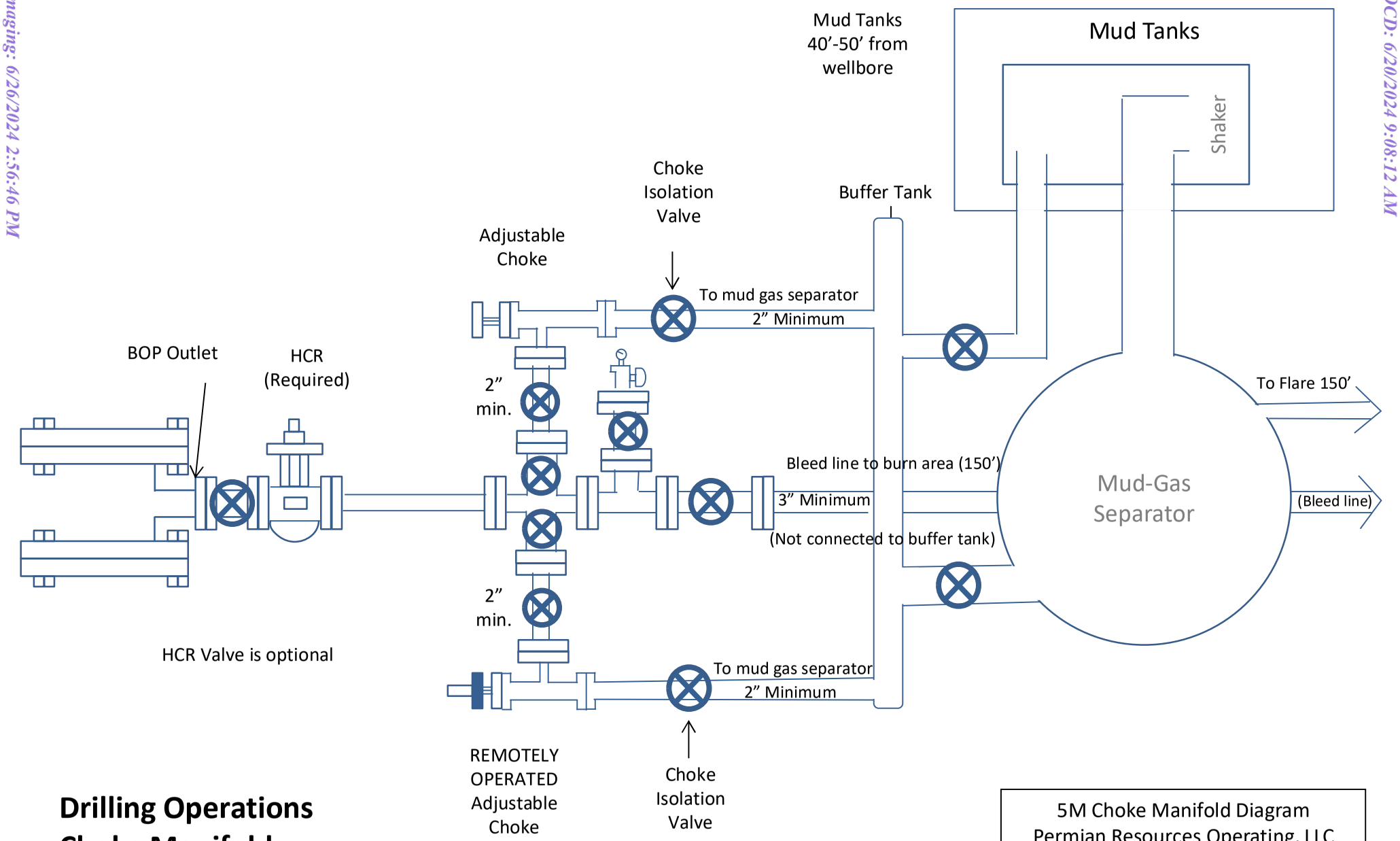
Anticipated Bottom Hole Pressure	4480	psi
Anticipated Surface Pressure	2580	psi
Anticipated Bottom Hole Temperature	143	°F
Anticipated Abnormal pressure, temp, or geo hazards	No	



Permian Resources Operating, LLC
5000# BOP

Bleed lines will discharge 100' from WH in non-H2S scenarios and 150' from WH in H2S scenarios.

Bleed lines will discharge 100' from WH in non-H2S scenarios and 150' from WH in H2S scenarios.



Drilling Operations
Choke Manifold
5M Service

5M Choke Manifold Diagram
Permian Resources Operating, LLC

BLACK GOLD®

GATES ENGINEERING & SERVICES NORTH AMERICA
7603 Prairie Oak Dr.
Houston, TX. 77086

PHONE: +1 (281) 602-4100
FAX: +1 (281) 602-4147
EMAIL: gesna.quality@gates.com
WEB: www.gates.com/oilandgas

CERTIFICATE OF CONFORMANCE

This is to verify that the items detailed below meet the requirements of the Customer's Purchase Order referenced herein, and are in Conformance with applicable specifications, and that Records of Required Tests are on file and subject to examination. The following items were inspected and hydrostatically tested at **Gates Engineering & Services North America** facilities in Houston, TX, USA.

CUSTOMER:	HELMERICH & PAYNE INTERNATIONAL DRILLING CO.
CUSTOMER P.O.#:	740414061 (SN: 62429 - 88061537)
CUSTOMER P/N:	SN: 62429 - 88061537
PART DESCRIPTION:	INSPECT AND RETEST CUSTOMER HOSE 3IN X 16FT CHOKE & KILL ASSEMBLY C/W 3-1/16 FLANGES BX154 SS INLAID RING GROOVE EACH END
SALES ORDER #:	525826
QUANTITY:	1
SERIAL #:	62429 H3-012523-17

SIGNATURE: F. Cisneros-

TITLE: QUALITY ASSURANCE

DATE: 1/26/2023

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TEST REPORT

CUSTOMER

Company:	HELMERICH & PAYNE INTERNATIONAL DRILLING CO.
Production description:	SN62429
Sales order #:	525826
Customer reference:	

TEST OBJECT

Serial number:	H3-012523-17
Lot number:	
Description:	SN62429
Hose ID:	3.0 CK03 16C 10K
Part number:	

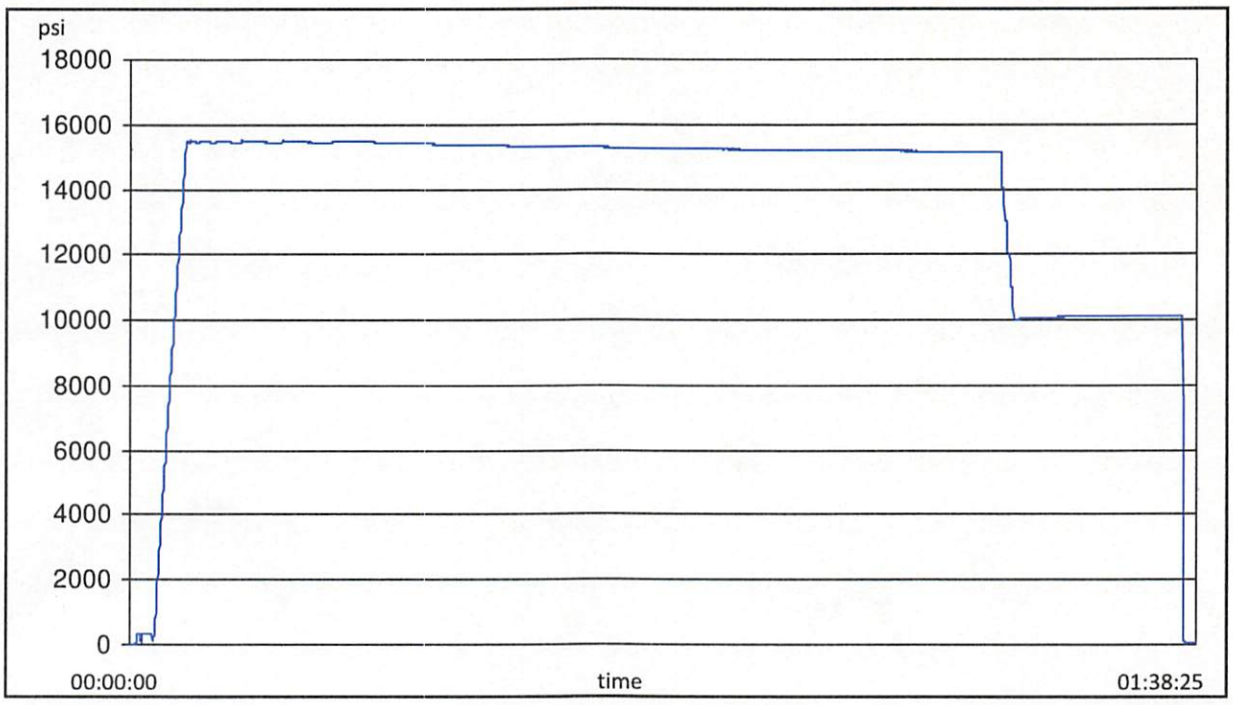
TEST INFORMATION

Test procedure:	GTS-04-053	
Test pressure:	15000.00	psi
Test pressure hold:	3600.00	sec
Work pressure:	10000.00	psi
Work pressure hold:	900.00	sec
Length difference:	0.00	%
Length difference:	0.00	inch

Fitting 1:	3.0 x 3-1/16 10K
Part number:	
Description:	
Fitting 2:	3.0 x 3-1/16 10K
Part number:	
Description:	

Visual check:		
Pressure test result:	PASS	
Length measurement result:		
Length:	16	feet

Test operator: Martin



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TEST REPORT

GAUGE TRACEABILITY

Description	Serial number	Calibration date	Calibration due date
S-25-A-W	110AQA1S	2022-03-09	2023-03-09
S-25-A-W	110CBWVV	2022-03-09	2023-03-09

Comment

Continental

CONTITECH RUBBER Industrial Kft.	No: QC-DB-062 / 2022
	Page: 16 / 131

ContiTech

TEST CERTIFICATE according to EN 10204 3.1 and Supplier's Declaration of Conformity acc. to ISO/IEC 17050-1				CERT. N°: 81142
CUSTOMER: ContiTech Oil & Marine Corp.			C.O. N°: 4501624407	
Supplier's name: Contitech Rubber Industrial Kft.		Supplier's address: Budapesti út 10. H-6728 Szeged		
CONTITECH ORDER N°: 1386035	HOSE TYPE: 3" ID	Choke & Kill Hose		
HOSE SERIAL N°: 81142	NOMINAL / ACTUAL LENGTH: 7,92 m / 7,90 m			
W.P. 69,0 MPa 10000 psi	T.P. 103,5 MPa 15000 psi	Duration: 60 min.		

Pressure test with water at ambient temperature

See attachment (1 page)

COUPLINGS Type	Serial N°	Quality	Heat N°
3" coupling with	4411	AISI 4130	68655
3 1/16" 10K API b.w. Flange end		AISI 4130	043795
3" coupling with	4428	AISI 4130	68626
3 1/16" 10K API Swivel Flange end		AISI 4130	041743
Hub		AISI 4130	54538

Not Designed For Well Testing **API Spec 16C 3rd Edition – FSL3**

Fire Rated **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 Customer Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, other technical standards and specifications and meet the relevant acceptance criteria and design requirements. This declaration of conformity is issued under the sole responsibility of the manufacturer.

COUNTRY OF ORIGIN HUNGARY/EU

Date:	Inspector	Quality Control
28. February 2022.		ContiTech Rubber Industrial Kft. Quality Control Dept. (1)
		István Farkas Lajos Bacsa

ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE
No: 81137, 81138, 81139,
81140, 81141, 81142

CONTITECH RUBBER Industrial Kft.	No: QC-DB-062 / 2022
	Page: 17 / 131

1/1

File Name : 048171_81137-81142.GEV,...,048181_81137-81142.GEV
File Message : 81137,81138,81139,81140,81141,81142
Device Type : GX10
Serial No. : S5P606399
Data Count : 1295

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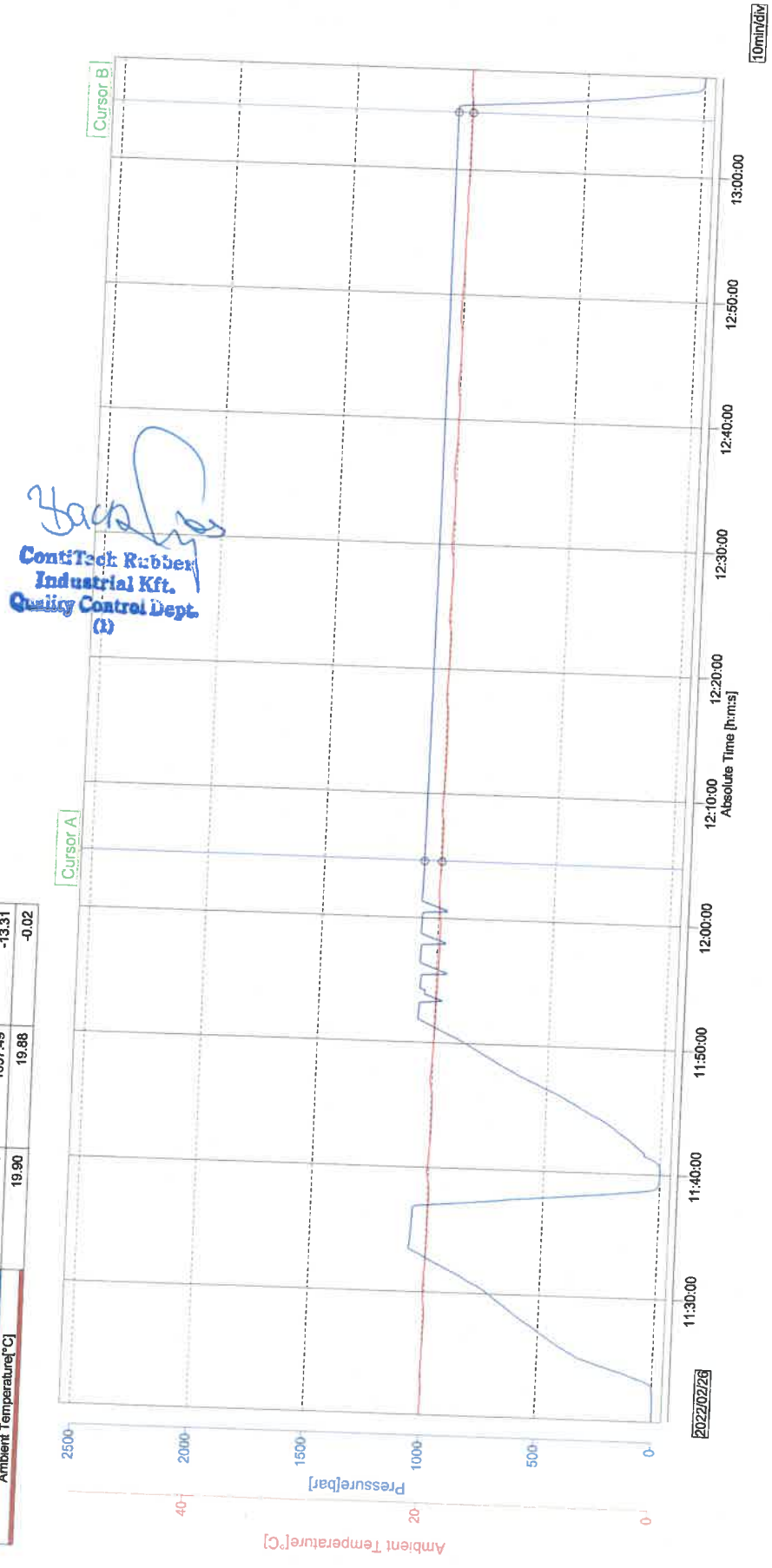
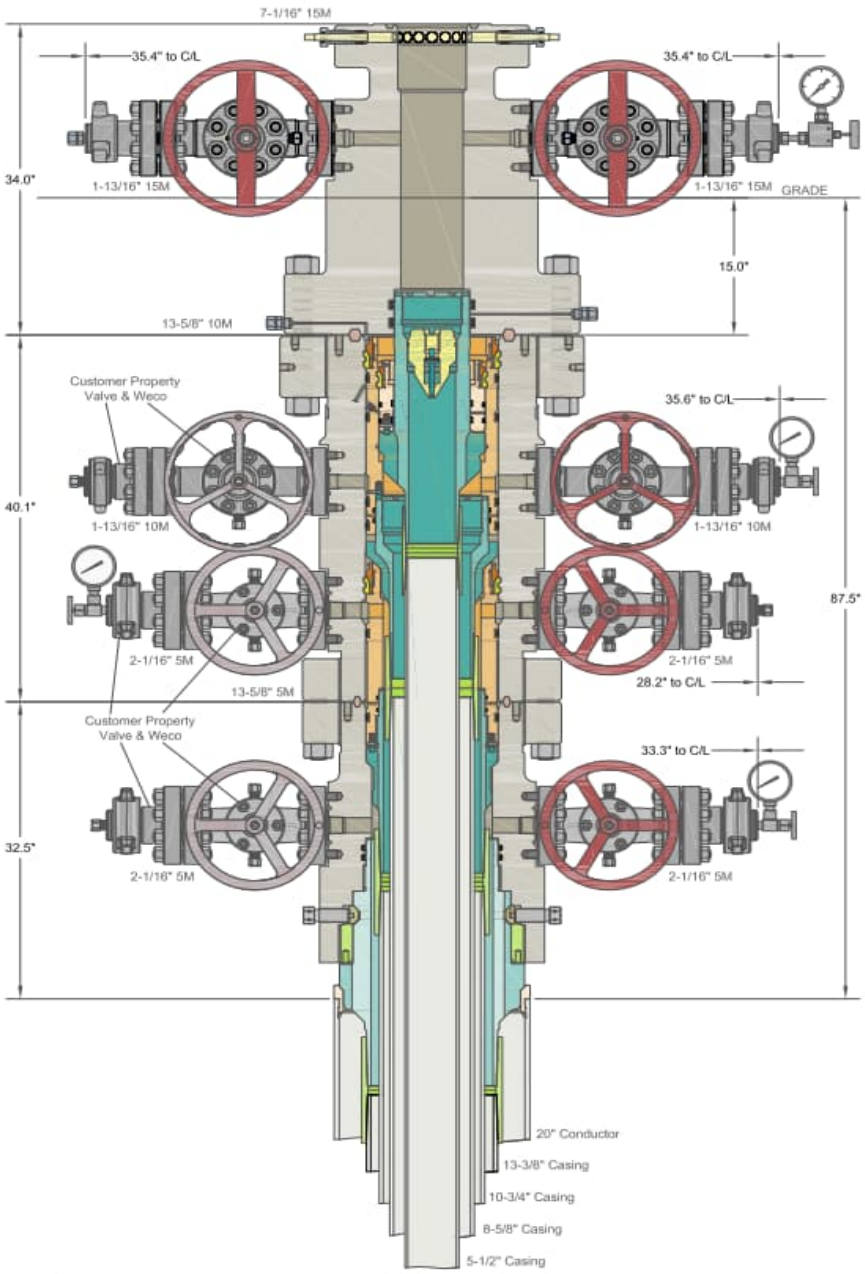


ContiTech Rubber
Industrial Kft.
Quality Control Dept.
(1)



ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC	PERMIAN RESOURCES NEW MEXICO		
20" x 13-3/8" x 10-3/4" x 8-5/8" x 5-1/2" MBU-4T-CFL-R-DBLO Sys. With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head And 10-3/4" & 7-5/8" & 5-1/2" Fluted Mandrel Casing Hangers	DRAWN	DLE	26OCT23
	APPRV		
	DRAWING NO.	HBE0001038	

Permian Resources Casing Design Criteria

A sundry will be requested if any lesser grade or different size casing is substituted. All casing will be centralized as specified in On Shore Order II. Casing will be tested as specified in On Shore Order II.

Casing Design Assumptions:

Surface

1) Burst Design Loads
   a) Displacement to Gas
      (1) Internal: Assumes a full column of gas in the casing with a gas gradient of 0.7 psi/ft in the absence of better information. It is limited to the controlling pressure based on the maximum expected pore pressure within the next drilling interval.
      (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
   b) Casing Pressure Test
      (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.
      (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
2) Collapse Loads
   a) Cementing
      (1) Internal: Displacement fluid density.
      (2) External: Mud weight from TOC to surface and cement slurry weight from TOC to shoe.
   b) Lost Returns with Mud Drop
      (1) Internal: Lost circulation at the TD of the next hole section and the fluid level falls to a depth where the hydrostatic pressure of the mud column equals pore pressure at the depth of the lost circulation zone.
      (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
3) Tension Loads
   a) Overpull Force
      1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
   b) Green Cement Casing Test
      1. Axial: Buoyant weight of the string plus cement plug bump pressure load.

Intermediate I

1) Burst Design Loads
   a) Displacement to Gas
      (1) Internal: Assumes a full column of gas in the casing with a gas gradient of 0.7 psi/ft in the absence of better information. It is limited to the controlling pressure based on the maximum expected pore pressure within the next drilling interval.
      (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
   b) Casing Pressure Test
      (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.

(2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.

2) Collapse Loads
   a) Cementing
      (1) Internal: Displacement fluid density.
      (2) External: Mud weight from TOC to surface and cement slurry weight from TOC to shoe.
   b) Lost Returns with Mud Drop
      (1) Internal: Lost circulation at the TD of the next hole section and the fluid level falls to a depth where the hydrostatic pressure of the mud column equals pore pressure at the depth of the lost circulation zone.
      (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
3) Tension Loads
   a) Overpull Force
      1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
   b) Green Cement Casing Test
      1. Axial: Buoyant weight of the string plus cement plug bump pressure load.

<u>Intermediate or Intermediate II</u>

1) Burst Design Loads
   a) Gas Kick Profile
      (1) Internal: Load profile based on influx encountered in lateral portion of wellbore with a maximum influx volume of 150 bbl and a kick intensity of 1.5 ppg using maximum anticipated MW of 9.9 ppg.
      (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
   b) Casing Pressure Test
      (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.
      (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
2) Collapse Loads
   a) Cementing
      (1) Internal: Displacement fluid density.
      (2) External: Mud weight from TOC to surface and cement slurry weight from TOC to shoe.
   b) Lost Returns with Mud Drop
      (1) Internal: Lost circulation at the deepest TVD of the next hole section and the fluid level falls to a depth where the hydrostatic pressure of the mud column equals pore pressure at the depth of the lost circulation zone.
      (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
3) Tension Loads
   a) Overpull Force
      1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
   b) Green Cement Casing Test
      1. Axial: Buoyant weight of the string plus cement plug bump pressure load.

Production

1) Burst Design Loads
   a) Injection Down Casing
      (1) Internal: Surface pressure plus injection fluid gradient.
      (2) External: Mud base-fluid density to top of cement and cement mix water gradient (8.4 ppg) below TOC.
   b) Casing Pressure Test (Drilling)
      (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.
      (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
   c) Casing Pressure Test (Production)
      (1) Internal: The design pressure test should be the greater of the planned test pressure prior to simulation down the casing, the regulatory test pressure, and the expected gas lift system pressure. The design test fluid should be the fluid associated with the pressure test having the greatest pressure.
      (2) External: Mud base-fluid density to top of cement and cement mix water gradient (8.4 ppg) below TOC.
   d) Tubing Leak
      (1) Internal: SITP plus a packer fluid gradient to the top of packer.
      (2) External: Mud base-fluid density to top of cement and cement mix water gradient (8.4 ppg) below TOC.
2) Collapse Loads
   a) Cementing
      (1) Internal: Displacement fluid density.
      (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
   b) Full Evacuation
      (1) Internal: Full void pipe.
      (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
3) Tension Loads
   a) Overpull Force
      1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
   b) Green Cement Casing Test
      1. Axial: Buoyant weight of the string plus cement plug bump pressure load.

Permian Resources
Multi-Well Pad Batch Drilling Procedure

Surface Casing - PR intends to Batch set all surface casing to a depth approved in the APD. Surface Holes will be batch drilled by a rig. Appropriate notifications will be made prior to spudding the well, running and cementing casing and prior to skidding to the rig to the next well on pad.

1. Drill Surface hole to Approved Depth with Rig and perform wellbore cleanup cycles. Trip out and rack back drilling BHA.
2. Run and land planned surface casing see Illustration 1-1 Below to depth approved in APD.
3. Set packoff and test to 5k psi
4. Offline Cement
5. Install wellhead with pressure gauge and nightcap. Nightcap is shown on final wellhead Stack up Illustration #2-2.
6. Skid Rig to adjacent well to drill Surface hole.
7. Surface casing test will be performed by the rig in order to allow ample time for Cement to develop 500psi compressive strength. Casing test to 0.22 psi/ft or 1500 psi whichever is greater - not to exceed 70% casing burst.

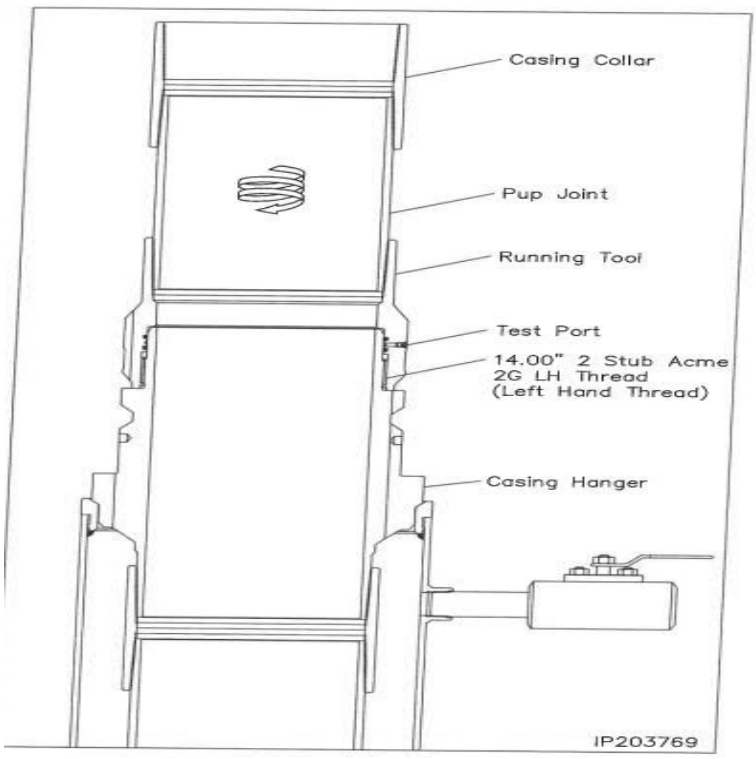


Illustration 1-1

Intermediate Casing – PR intends to Batch set all intermediate casing strings to a depth approved in the APD. Intermediate Holes will be batch drilled by the rig. Appropriate notifications will be made prior to testing BOPE, and prior to running/cementing all casing strings.

1. Rig will remove the nightcap and install and test BOPE.
2. Test Surface casing per COA WOC timing (.22 psi/ft or 1500 psi whichever is greater) - not to exceed 70% casing burst. Cement must have achieved 500psi compressive strength prior to test.
3. Install wear bushing then drill out surface casing shoe-track plus 20' and conduct FIT to minimum of the MW equivalent anticipated to control the formation pressure to the next casing point.
4. Drill Intermediate hole to approved casing point. Trip out of hole with BHA to run Casing.
5. Remove wear bushing then run and land Intermediate Casing with mandrel hanger in wellhead.
6. Cement casing to surface with floats holding.
7. Washout stack then run wash tool in wellhead and wash hanger and pack-off setting area.
8. Install pack-off and test void to 5,000 psi for 15 minutes. Nightcap shown on final wellhead stack up illustration 2-2 on page 3.
9. Test casing per COA WOC timing (.22 psi/ft or 1500 psi whichever is greater) - not to exceed 70% casing burst. Cement must have achieved 500psi compressive strength prior to test.
10. Install nightcap – skid rig to adjacent well to drill Intermediate hole.

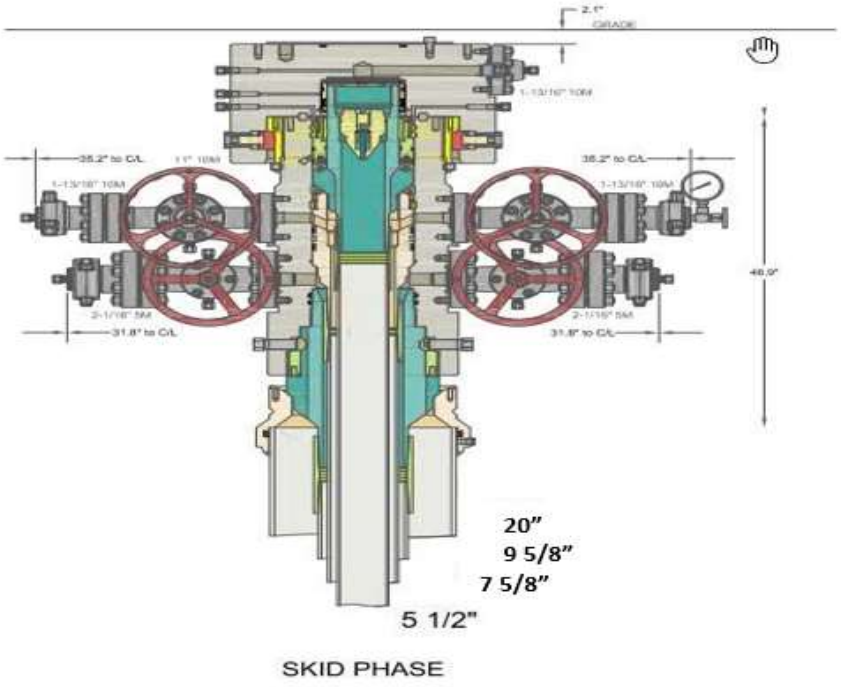


Illustration 2-2

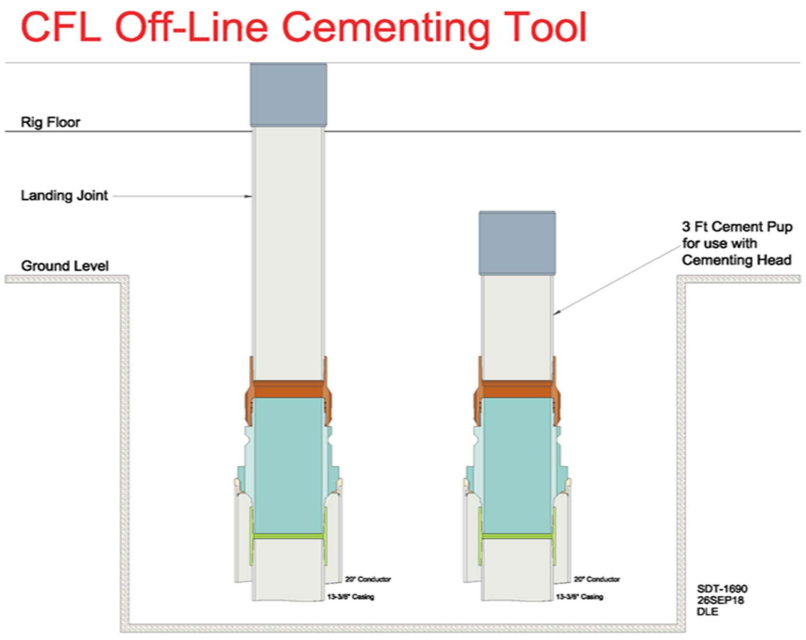
Production Casing – PR intends to Batch set all Production casings with Rig. Appropriate notifications will be made prior Testing BOPE, and prior to running/cementing all casing strings.

1. Drilling Rig will remove the nightcap and install and test BOPE.
2. Install wear bushing then drill Intermediate shoe-track plus 20' and conduct FIT to minimum MW equivalent to control the formation pressure to TD of well.
3. Drill Vertical hole to KOP – Trip out for Curve BHA.
4. Drill Curve, landing in production interval – Trip for Lateral BHA.
5. Drill Lateral / Production hole to Permitted BHL, perform cleanup cycles and trip out to run Production Casing.
6. Remove wear bushing then run Production casing to TD landing casing mandrel in wellhead.
7. Cement Production string with floats holding.
8. Run in with wash tool and wash wellhead area – install pack-off and test void to 5,000psi for 15 minutes.
9. Install BPV in Production mandrel hanger – Nipple down BOPE and install nightcap.
10. Test nightcap void to 5,000 psi for 30 minutes per illustration 2-2
11. Skid rig to adjacent well on pad to drill production hole.

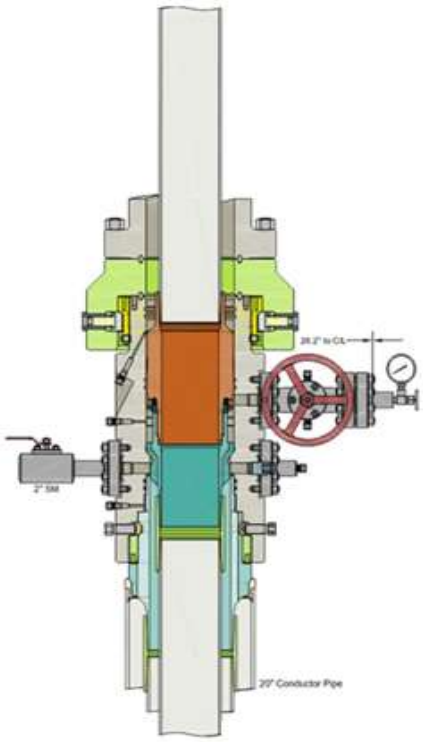
Permian Resources Offline Cementing Procedure
Surface & Intermediate Casing

1. Drill hole to Total Depth with Rig and perform wellbore cleanup cycles.
2. Run and casing to Depth.
3. Land casing with mandrel.
4. Circulate 1.5 csg capacity.
5. Flow test – Confirm well is static and floats are holding.
6. Set Annular packoff and pressure test. Test to 5k.
7. Nipple down BOP and install cap flange.
8. Skid rig to next well on pad
9. Remove cap flange (confirm well is static before removal)
    a) If well is not static use the casing outlet valves to kill well
    b) Drillers method will be used in well control event
    c) High pressure return line will be rigged up to lower casing valve and run to choke manifold to control annular pressure
    d) Kill mud will be circulated once influx is circulated out of hole
    e) Confirm well is static and remove cap flange to start offline cement operations
10. Install offline cement tool.
11. Rig up cementers.
12. Circulate bottoms up with cement truck
13. Commence planned cement job, take returns through the annulus wellhead valve
14. After plug is bumped confirm floats hold and well is static
15. Rig down cementers and equipment
16. Install night cap with pressure gauge to monitor.

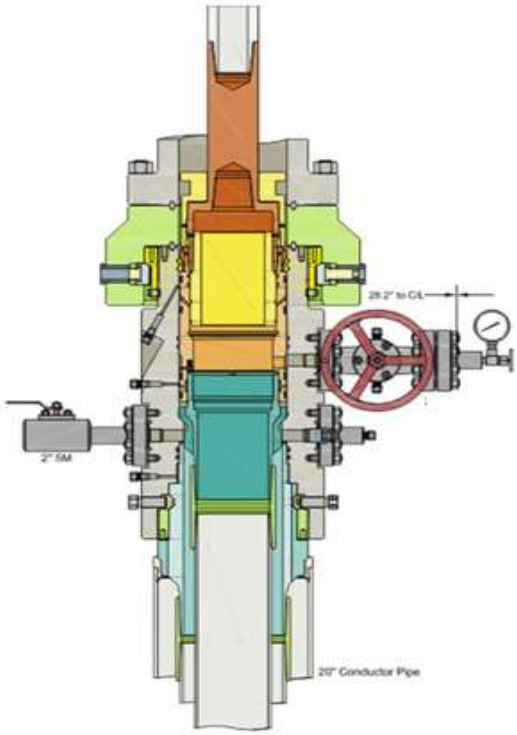
13 3/8" Surface



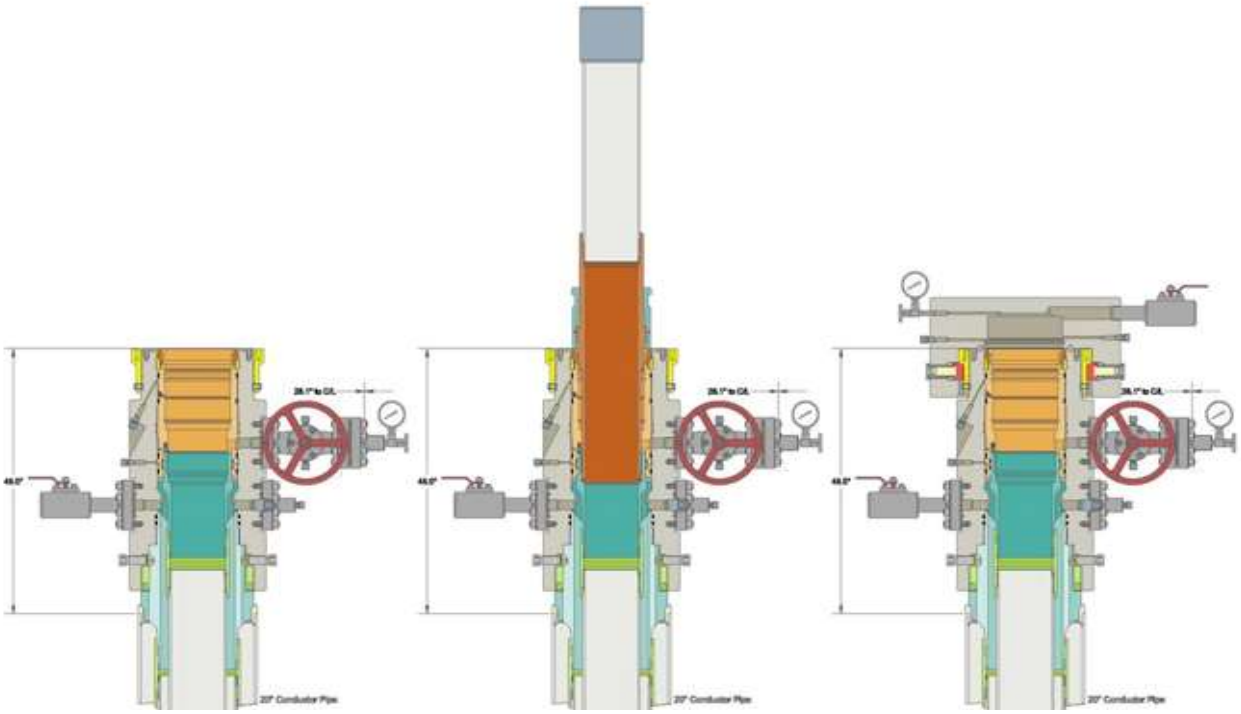
Intermediate



Run 7 5/8" Casing
Land Casing on 7 5/8" Mandrel Hanger
Cement 7 5/8" Casing
Retrieve Running Tool



Run 9 5/8" Packoff
Test Upper and Lower Seals
Engage Lockring
Retrieve Running Tool





Permian Resources
BOP Break Testing Variance Procedure

Subject: Request for a Variance Allowing break Testing of the Blowout Preventer Equipment (BOPE). Permian Resources requests a variance to ONLY test broken pressure seals on the BOPE and function test BOP when skidding a drilling rig between multiple wells on a pad.

Background

Title 43 CFR 3172, Drilling Operations, Sections 6.b.9.iv states that the BOP test must be performed whenever any seal subject to test pressure is broken. The current interpretation of the Bureau of Land Management (BLM) requires a complete BOP test and not just a test of the affected component. 43 CFR 3172.13, Variances from minimum standards states, "An operator may request the authorized officer to approve a variance from any of the minimum standards prescribed in §§ 3172.6 through 3172.12. All such requests shall be submitted in writing to the appropriate authorized officer and provide information as to the circumstances which warrant approval of the variance(s) requested and the proposed alternative methods by which the related minimum standard(s) are to be satisfied. The authorized officer, after considering all relevant factors, if appropriate, may approve the requested variance(s) if it is determined that the proposed alternative(s) meet or exceed the objectives of the applicable minimum standard(s).". Permian Resources feels the break testing the BOPE is such a situation. Therefore, as per 43 CFR 3172.13, Permian Resources submits this request for the variance.

Supporting Documentation

The language used in 43 CFR 3172 became effective on December 19, 1988 and has remained the standard for regulating BLM onshore drilling operations for over 30 years. During this time, there have been significant changes in drilling technology. The BLM continues to use the variance request process to allow for the use of modern technology and acceptable engineering practices that have arisen since 43 CFR 3172 was originally released. The Permian Resources drilling rig fleet has many modern upgrades that allow the intact BOP stack to be moved between well slots on a multi-well pad, as well as, wellhead designs that incorporate quick connects facilitating release of the BOP from the wellhead without breaking any BOP stack components apart. These technologies have been used extensively offshore, and other regulators, API, and many operators around the world have endorsed break testing as safe and reliable.

Figure 1: Winch System attached to BOP Stack

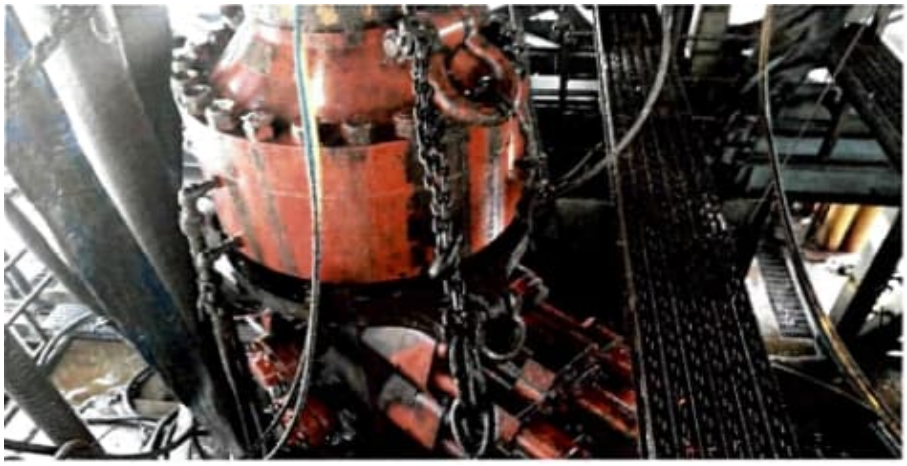


Figure 2: BOP Winch System

American Petroleum Institute (API) standards, specification and recommended practices are considered the industry standard and are consistently utilized and referenced by the industry. 43 CFR 3172 recognizes API recommended Practices (RP) 53 in its original development. API Standard 53, Well Control Equipment Systems for Drilling Wells (Fifth Edition, December 2018, Annex C, Table C.4) recognizes break testing as an acceptable practice. Specifically, API Standard 53, Section 5.3.7.1 states "A pressure test of the pressure containing component shall be performed following the disconnection or repair, limited to the affected component." See Table C.4 below for reference.

Table C.4—Initial Pressure Testing, Surface BOP Stacks

Component to be Pressure Tested	Pressure Test—Low Pressure[a,c] psig (MPa)	Pressure Test—High Pressure[a,c]	
		Change Out of Component, Elastomer, or Ring Gasket	No Change Out of Component, Elastomer, or Ring Gasket
Annular preventer[b]	250 to 350 (1.72 to 2.41)	RWP of annular preventer	MASP or 70% annular RWP, whichever is lower.
Fixed pipe, variable bore, blind, and BSR preventers[a,c]	250 to 350 (1.72 to 2.41)	RWP of ram preventer or wellhead system, whichever is lower	ITP
Choke and kill line and BOP side outlet valves below ram preventers (both sides)	250 to 350 (1.72 to 2.41)	RWP of side outlet valve or wellhead system, whichever is lower	ITP
Choke manifold—upstream of chokes[e]	250 to 350 (1.72 to 2.41)	RWP of ram preventers or wellhead system, whichever is lower	ITP
Choke manifold—downstream of chokes[e]	250 to 350 (1.72 to 2.41)	RWP of valve(s), line(s), or MASP for the well program, whichever is lower	
Kelly, kelly valves, drill pipe safety valves, IBOPs	250 to 350 (1.72 to 2.41)	MASP for the well program	

[a] Pressure test evaluation periods shall be a minimum of five minutes.
No visible leaks.
The pressure shall remain stable during the evaluation period. The pressure shall not decrease below the intended test pressure.

[b] Annular(s) and VBR(s) shall be pressure tested on the largest and smallest OD drill pipe to be used in well program.

[c] For pad drilling operations, moving from one wellhead to another within the 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken.

[d] For surface offshore operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented during the initial test. For land operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented at commissioning and annually.

[e] Adjustable chokes are not required to be full sealing devices. Pressure testing against a closed choke is not required.

The Bureau of Safety and Environmental Enforcement (BSEE), Department of Interior, has also utilized the API standards, specification and best practices in the development of its offshore oil and gas regulations and incorporates them by reference within its regulations.

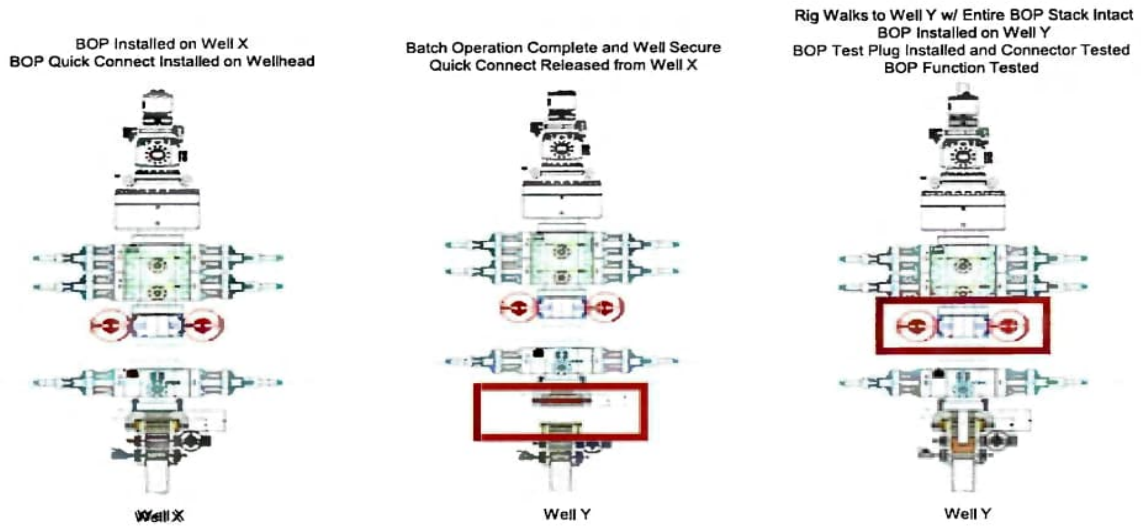
Break testing has been approved by the BLM in the past with other operators based on the detailed information provided in this document.

Permian Resources feels break testing and our current procedures meet the intent of 43 CFR 3172 and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. Permian Resources internal standards require complete BOPE tests more often than that of 43 CFR 3172 (every 21 days). In addition to function testing the annular, pipe rams and blind rams after each BOP nipple up, Permian Resources performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of 43 CFR 3172.

Procedures

1) Permian Resources will use this document for our break testing plan for New Mexico Delaware Basin. The summary below will be referenced in the APD or Sundry Notice and receive approval prior to implementing this variance.
2) Permian Resources will perform BOP break testing on multi-wells pads where multiple intermediate sections can be drilled and cased within the 21-day BOP test window.
   a)A full BOP test will be conducted on the first well on the pad.
   b)The first intermediate hole section drilled on the pad will be the deepest. All the remaining hole sections will be the same formation depth or shallower.
   c) A full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.
   d) A full BOP test will be required prior to drilling any production hole.
3) After performing a complete BOP test on the first well, the intermediate hole section will be drilled and cased, two breaks would be made on the BOP equipment.
   a) Between the HCV valve and choke line connection
   b)Between the BOP quick connect and the wellhead
4) The BOP is then lifted and removed from the wellhead by a hydraulic system.
5) After skidding to the next well, the BOP is moved to the wellhead by the same hydraulic system and installed.
6) The connections mentioned in 3a and 3b will then be reconnected.
7) Install test plug into the wellhead using test joint or drill pipe.
8) A shell test is performed against the upper pipe rams testing the two breaks.
9) The shell test will consist of a 250 psi low test and a high test to the value submitted in the APD or Sundry (e.g. 5,000 psi or 10,000psi).
10) Function tests will be performed on the following components: lower pipe rams, blind rams, and annular.
11) For a multi-well pad the same two breaks on the BOP would be made and on the next wells and steps 4 through 10 would be repeated.
12) A second break test would only be done if the intermediate hole section being drilled could not be completed within the 21 day BOP test window.

Note: Picture below highlights BOP components that will be tested during batch operations



Summary

A variance is requested to ONLY test broken pressure seals on the BOP equipment when moving from wellhead to wellhead which is in compliance with API Standard 53. API Standard 53 states, that for pad drilling operations, moving from one wellhead to another within 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken.

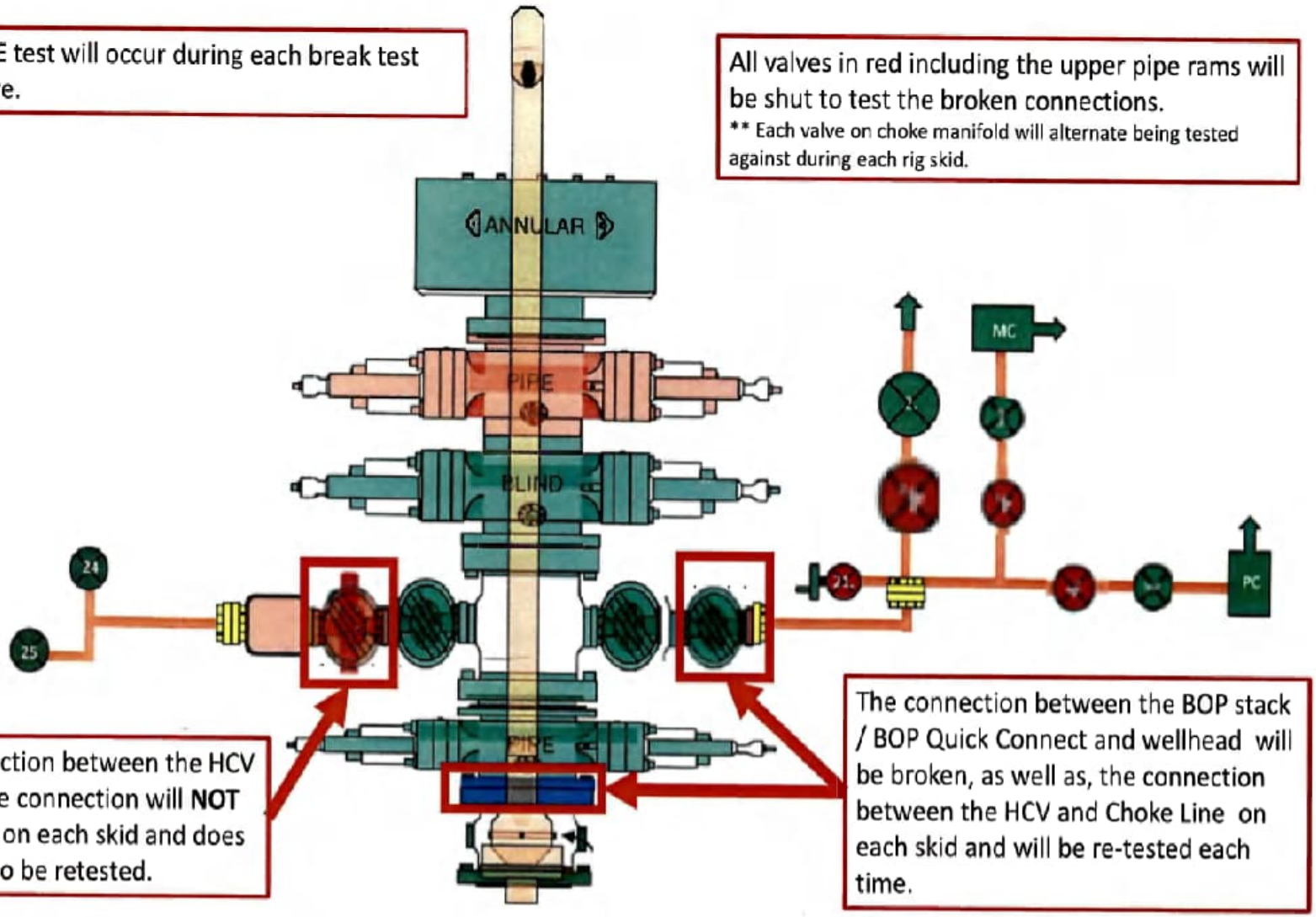
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control
event occurs prior to the commencement of a BOPE Break Testing operation.

Based on public data and the supporting documentation submitted herein to the BLM, we will request permission to ONLY retest broken pressure seals if the following conditions are met:

1) After a full BOP test is conducted on the first well on the pad.
2) The first intermediate hole section drilled on the pad will be the deepest. All the remaining hole sections will be the same depth or shallower.
3) A full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.
4) A full BOP test will be required prior to drilling the production hole.

Only **ONE** test will occur during each break test procedure.

All valves in red including the upper pipe rams will be shut to test the broken connections.
** Each valve on choke manifold will alternate being tested against during each rig skid.



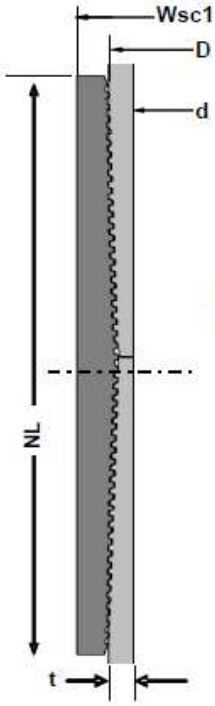
The connection between the HCV and kill line connection will **NOT** be broken on each skid and does not need to be retested.

The connection between the BOP stack / BOP Quick Connect and wellhead will be broken, as well as, the connection between the HCV and Choke Line on each skid and will be re-tested each time.

Metal One Corp.	GEOCONN-SC Pipe: SeAH P110RY 95%PBW (SMYS110ksi) *1 Coupling: P110RY (SMYS110ksi) Connection Data Sheet	Page	MAI GC 5.5 17 SeAH P110RY 95%RBW+SC-Cplg6.050 P110RY
Metal One		Date	3-Feb-21
		Rev.	0

Geometry

GEOCONN-SC



Pipe Body	Imperial		S.I.	
Grade *1	P110RY	-	P110RY	-
SMYS	110	ksi	110	ksi
Pipe OD (D)	5.500	in	139.70	mm
Weight	17.00	lb/ft	25.33	kg/m
Wall Thickness (t)	0.304	in	7.72	mm
Pipe ID (d)	4.892	in	124.26	mm
Drift Dia.	4.767	in	121.08	mm

Connection				
Coupling SMYS	110	ksi	110	ksi
SC-Coupling OD (Wsc1)	6.050	in	153.67	mm
Coupling Length (NL)	8.350	in	212.09	mm
Make up Loss	4.125	in	104.78	mm
Pipe Critical Area	4.96	in^2	3,202	mm^2
Box Critical Area	6.10	in^2	3,937	mm^2
Thread Taper	1 / 16 (3/4" per ft)			
Number of Threads	5 TPI			

Performance

Performance Properties for Pipe Body	Imperial		S.I.	
S.M.Y.S. *1	546	kips	2,428	kN
M.I.Y.P. *1	11,550	psi	79.66	MPa
Collapse Strength *1	7,480	psi	51.59	MPa

Note S.M.Y.S.= Specified Minimum YIELD Strength of Pipe body
M.I.Y.P. = Minimum Internal Yield Pressure of Pipe body

*1: SeAH P110RY 95%RBW: SMYS110ksi, MIYP11,550psi

Performance Properties for Connection	
Min. Connection Joint Strength	100% of S.M.Y.S.
Min. Compression Yield	100% of S.M.Y.S.
Internal Pressure	100% of M.I.Y.P.
External Pressure	100% of Collapse Strength
Max. DLS (deg. /100ft)	>90

Recommended Torque				
Min.	10,800	ft-lb	14,600	N-m
Opti.	12,000	ft-lb	16,200	N-m
Max.	13,200	ft-lb	17,800	N-m
Operational Max.	15,600	ft-lb	21,100	N-m

Note : Operational Max. torque can be applied for high torque application

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Operator: Permian Resources Operating, LLC 300 N. Marienfeld St Ste 1000 Midland, TX 79701	OGRID: 372165
	Action Number: 356270
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	All original COA's still apply. Additionally, if cement is not circulated to surface during cementing operations, then a CBL is required.	6/26/2024