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

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

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

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

8. Lease Name and Well No.

[322254]

2. Name of Operator **[372165]**

9. API Well No. **30-025-48390 000**

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool, or Exploratory **[96434]**

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

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

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

12. County or Parish

13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

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	Name *(Printed/Typed)*	Date
Title		
Approved by *(Signature)*	Name *(Printed/Typed)*	Date
Title	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 01/25/2021

01/25/2021

SL

APPROVED WITH CONDITIONS

Approval Date: 06/09/2020

(Continued on page 2)

*(Instructions on page 2)

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

Application Data Report
06/10/2020

APD ID: 10400049567 **Submission Date:** 10/17/2019

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400049567 **Tie to previous NOS?** N **Submission Date:** 10/17/2019

BLM Office: CARLSBAD **User:** Kanicia Schlichting **Title:** Sr. Regulatory Analyst

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

Lease number: NMNM126971 **Lease Acres:** 240

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

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

Agreement number:

Agreement name:

Keep application confidential? Y

Permitting Agent? NO **APD Operator:** CENTENNIAL RESOURCE PRODUCTION LLC

Operator letter of designation:

Operator Info

Operator Organization Name: CENTENNIAL RESOURCE PRODUCTION LLC

Operator Address: 1001 17th Street, Suite 1800

Zip: 80202

Operator PO Box:

Operator City: Denver **State:** CO

Operator Phone: (720)499-1400

Operator Internet Address:

Section 2 - Well Information

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

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

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

Well Name: RAIDER FEDERAL **Well Number:** 401H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** 2ND BONE SPRING SHALE **Pool Name:** RED HILLS; BONE SPRING, NORTH

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

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

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

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** N **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** RAIDER PAD **Number:** 302

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

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 18 Miles **Distance to nearest well:** 30 FT **Distance to lease line:** 433 FT

Reservoir well spacing assigned acres Measurement: 160 Acres

Well plat: RAIDER_FEDERAL_401H___C102_20191016122132.pdf

RAIDER_FEDERAL_401H___Lease_C102_20191016122132.pdf

Well work start Date: 04/20/2020 **Duration:** 30 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 23782 **Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	433	FNL	1302	FEL	24S	34E	21	Aliquot NENE	32.209109	-103.470598	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 126971	3531	0	0	Y
KOP Leg #1	433	FNL	1302	FEL	24S	34E	21	Aliquot NENE	32.209109	-103.470598	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 126971	-6396	9963	9927	Y

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
PPP Leg #1-1	100	FNL	1650	FEL	24S	34E	21	Aliquot NWNE	32.210026	-103.471724	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 126971	-6969	10863	10500	Y
EXIT Leg #1	100	FSL	1650	FEL	24S	34E	21	Aliquot SWSE	32.196069	-103.471704	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 126971	-6969	15325	10500	Y
BHL Leg #1	100	FSL	1650	FEL	24S	34E	21	Aliquot SWSE	32.196069	-103.471704	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 126971	-6969	15325	10500	Y

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

Drilling Plan Data Report
06/10/2020

APD ID: 10400049567 **Submission Date:** 10/17/2019

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
563837	RUSTLER	3531	1215	1215	SANDSTONE	NONE	N
563841	CAPITAN REEF	-1855	5386	5386	OTHER : CARBONATE	USEABLE WATER	N
563838	BELL CANYON	-1897	5428	5428	SANDSTONE	NATURAL GAS, OIL	N
563842	CHERRY CANYON	-2797	6328	6328	SANDSTONE	NATURAL GAS, OIL	N
563843	BRUSHY CANYON	-4196	7727	7727	SANDSTONE	NATURAL GAS, OIL	N
563844	BONE SPRING LIME	-5584	9115	9115	OTHER : CARBONATE	NATURAL GAS, OIL	N
563840	AVALON SAND	-5672	9203	9203	SHALE	CO2, NATURAL GAS, OIL	N
563839	FIRST BONE SPRING SAND	-6659	10190	10190	SANDSTONE	NATURAL GAS, OIL	N
563835	BONE SPRING 2ND	-6870	10401	10401	SANDSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 10500

Equipment: The BOP and related equipment will meet or exceed the requirements of a 5M-psi system as set forth in On Shore Order No. 2. See attached BOP Schematic. A. Casinghead: 13 5/8” – 5,000 psi SOW x 13” – 5,000 psi WP Intermediate Spool: 13” – 5,000 psi WP x 11” – 5,000 psi WP Tubinghead: 11” – 5,000 psi WP x 7 1/16" – 15,000 psi WP B. Minimum Specified Pressure Control Equipment • Annular preventer • One Pipe ram, One blind ram • Drilling spool, or blowout preventer with 2 side outlets. Choke side will be a 3-inch minimum diameter, kill line shall be at least 2-inch diameter • 3 inch diameter choke line • 2 – 3 inch choke line valves • 2 inch kill line • 2 chokes with 1 remotely controlled from rig floor (see Figure 2) • 2 – 2 inch kill line valves and a check valve • Upper kelly cock valve with handle available • When the expected pressures approach working pressure of the system, 1 remote kill line tested to stack pressure (which shall run to the outer edge of the substructure and be unobstructed) • Lower kelly cock valve with handle available • Safety valve(s) and subs to fit all drill string connections in use • Inside BOP or float sub available • Pressure gauge on choke manifold • All BOPE connections subjected to well pressure shall be flanged, welded, or clamped • Fill-up line above the uppermost preventer. C. Auxiliary Equipment • Audio and visual mud monitoring equipment shall be placed to detect volume changes indicating loss or gain of circulating fluid volume. (OOS 1, III.C.2) • Gas Buster will be used below intermediate casing setting depth. • Upper and lower kelly cocks with handles, safety valve and subs to fit all drill string connections and a pressure gauge installed on choke manifold.

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Requesting Variance? YES

Variance request: Centennial is requesting to use a flex hose on the choke manifold. Please see attachment for specs in section 8.

Testing Procedure: 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 30 day intervals e. checked daily as to mechanical operating conditions. The ram type preventer(s) will be tested using a test plug to 250 psi (low) and 5,000 psi (high) (casinghead WP) with a test plug upon its installation onto the 13 surface casing. If a test plug is not used, the ram type preventer(s) shall be tested to 70% of the minimum internal yield pressure of the casing. The annular type preventer(s) shall be tested to 3500 psi. Pressure will be maintained for at least 10 minutes or until provisions of the test are met, whichever is longer. A Sundry Notice (Form 3160 5), along with a copy of the BOP test report, shall be submitted to the local BLM office within 5 working days following the test. If the bleed line is connected into the buffer tank (header), all BOP equipment including the buffer tank and associated valves will be rated at the required BOP pressure. The BLM office will be provided with a minimum of four (4) hours notice of BOP testing to allow witnessing. The BOP Configuration, choke manifold layout, and accumulator system, will be in compliance with Onshore Order 2 for a 5,000 psi system. A remote accumulator will be used. Pressures, capacities, and specific placement and use of the manual and/or hydraulic controls, accumulator controls, bleed lines, etc., will be identified at the time of the BLM 'witnessed BOP test. Any remote controls will be capable of both opening and closing all preventers and shall be readily accessible.

Choke Diagram Attachment:

HP650_10M_Choke_Manifold_20191010162831.pdf

BOP Diagram Attachment:

HP650_BOP_Schematic_CoFlex_Choke_5K_2019_1_29_20191010162910.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	CONDUCTOR	26	20.0	NEW	API	N	0	120	0	120	3531	3411	120	H-40	94	OTHER - Weld						
2	SURFACE	17.5	13.375	NEW	API	N	0	1350	0	1350	3531	2181	1350	J-55	54.5	OTHER - BTC	1.7	4.1	DRY	11.59	DRY	11.59
3	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5386	0	5350	3498	-1819	5386	J-55	40	LT&C	1.31	1.42	DRY	2.43	DRY	2.94
4	PRODUCTION	8.75	5.5	NEW	API	N	0	9963	0	9727	3498	-6196	9963	P-110	20	OTHER - TCBC-HT	2.15	2.45	DRY	3.23	DRY	3.23
5	PRODUCTION	8.5	5.5	NEW	API	N	9963	15325	9927	10500	-6396	-6969	5362	P-110	20	OTHER - TCBC-HT	2.03	2.31	DRY	3.05	DRY	3.05

Casing Attachments

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Casing Attachments

Casing ID: 1 **String Type:** CONDUCTOR

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing ID: 2 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20180920095914.pdf

Casing ID: 3 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20180920100112.pdf

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20190307121343.pdf

Technical_Data_Sheet_HIS_TCBC_HT_5.5_20_P110RY_20200428092149.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20180920100203.pdf

Technical_Data_Sheet_HIS_TCBC_HT_5.5_20_P110RY_20200428092130.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		0	0	0	0	0	0		0	0
CONDUCTOR	Lead		0	120	121	1.49	12.9	181	0	Grout	Bentonite 4% BWOC, Cellophane #/sx, CaCl2 2% BWOC.

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	850	679	1.74	13.5	1181	100	Class C Premium	Premium Gel Bentonite 4%, C-45 Econolite 0.25%, Phenoseal 0.25#/sk, CaCl 1%, Defoamer C-41P 0.75%
SURFACE	Tail		850	1350	518	1.34	14.8	695	100	Class C Premium	C-45 Econolite 0.10%, CaCl 1.0%
INTERMEDIATE	Lead		0	4886	1161	3.44	10.7	3993	150	TXI Lightweight	Salt 1.77/sk, C-45 Econolite 2.25%, STE 6.00%, Citric Acid 0.18%, C-19 0.10%, CSA-1000 0.20%, C-530P 0.30%, CTB-15 LCM 7#/sk, Gyp Seal 8#/sk
INTERMEDIATE	Tail		4886	5386	141	1.33	14.8	188	20	Class C Premium	C-45 Econolite 0.10%, Citric acid 0.05%, C503P 0.25%
PRODUCTION	Lead		0	9963	976	3.41	10.6	3329	30	TXI Lightweight	Salt 8.98#/sk, STE 6.00%, Citric acid 0.20%, CSA-1000 0.23%, C47B 0.10%, C-503P 0.30%
PRODUCTION	Tail		9963	15325	1238	1.24	14.2	1535	25	50:25:25 Class H: Poz: CPO18	Citric acid 0.03%, CSA-1000 0.05%, C47B 0.25%, C-503P 0.30%

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

Describe what will be on location to control well or mitigate other conditions: 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 diesel emulsified brine fluid to inhibit salt washout and prevent severe fluid losses. The production hole will employ 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 mud check practices.

Circulating Medium Table

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1350	5386	OTHER : Brine	9	10							
5386	15325	OTHER : OBM/Brine	8.8	10							
0	1350	OTHER : FW	8.6	9.5							

Section 6 - Test, Logging, Coring

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

Will utilize MWD/LWD (Gamma Ray logging) from intermediate hole to TD of the well.

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

OTHER,

Other log type(s):

GR

Coring operation description for the well:

N/A

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5460 **Anticipated Surface Pressure:** 3150

Anticipated Bottom Hole Temperature(F): 170

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

H2S_Plan_Raider_Federal_401H_20191016125729.docx

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

RAIDER_FEDERAL_401H_Dir_AC_Plot_20191016125752.pdf

Other proposed operations facets description:

We are planning on using a spudder rig to preset surface casing. Please see attached batch drilling procedure. Gas Capture Plan is attached.

Other proposed operations facets attachment:

Raider_Federal_Com_502H_701H_702H_Gas_Capture_Plan_20190307124300.docx

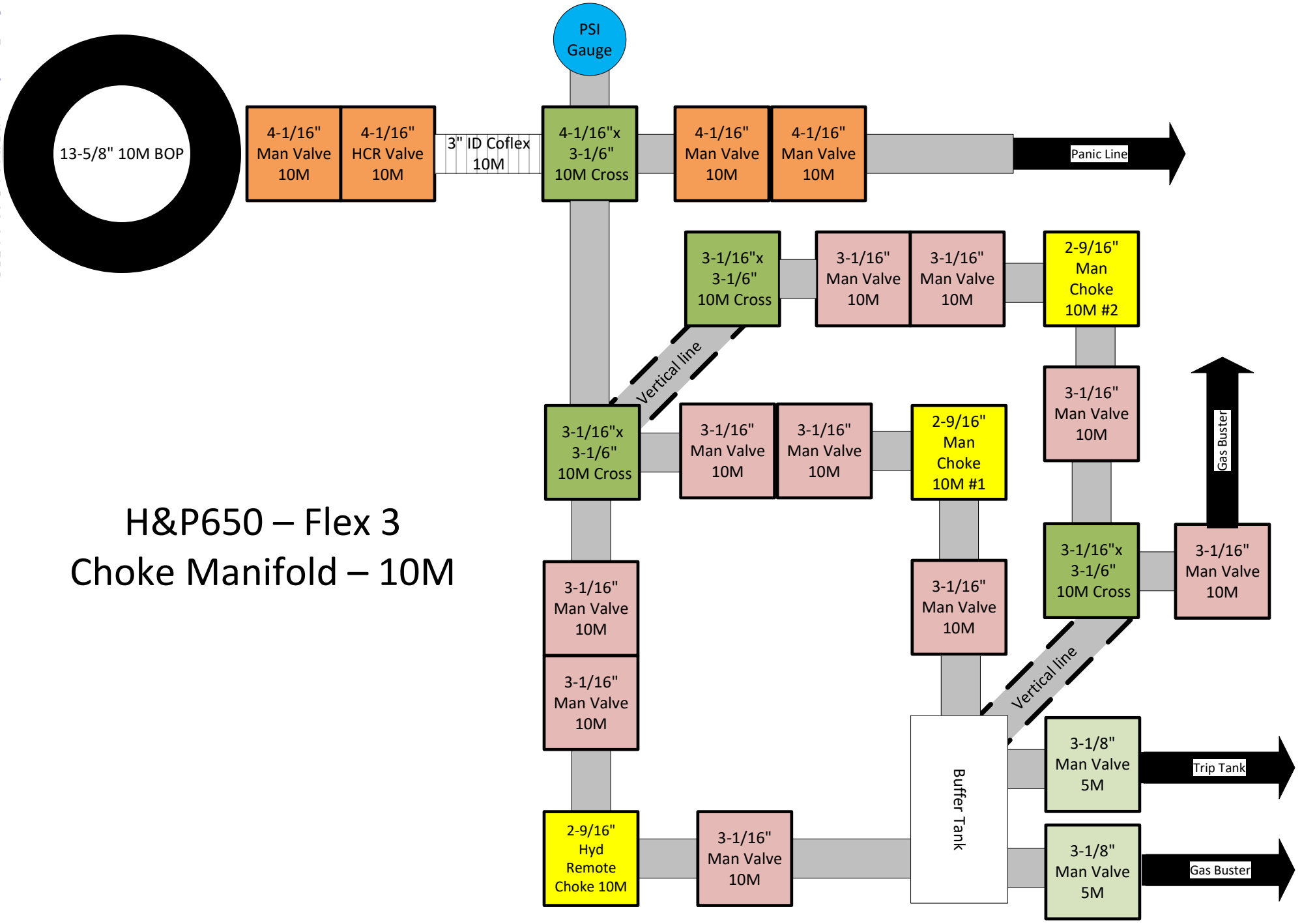
CRD_Batch_Setting_Procedures_20191010165234.pdf

Other Variance attachment:

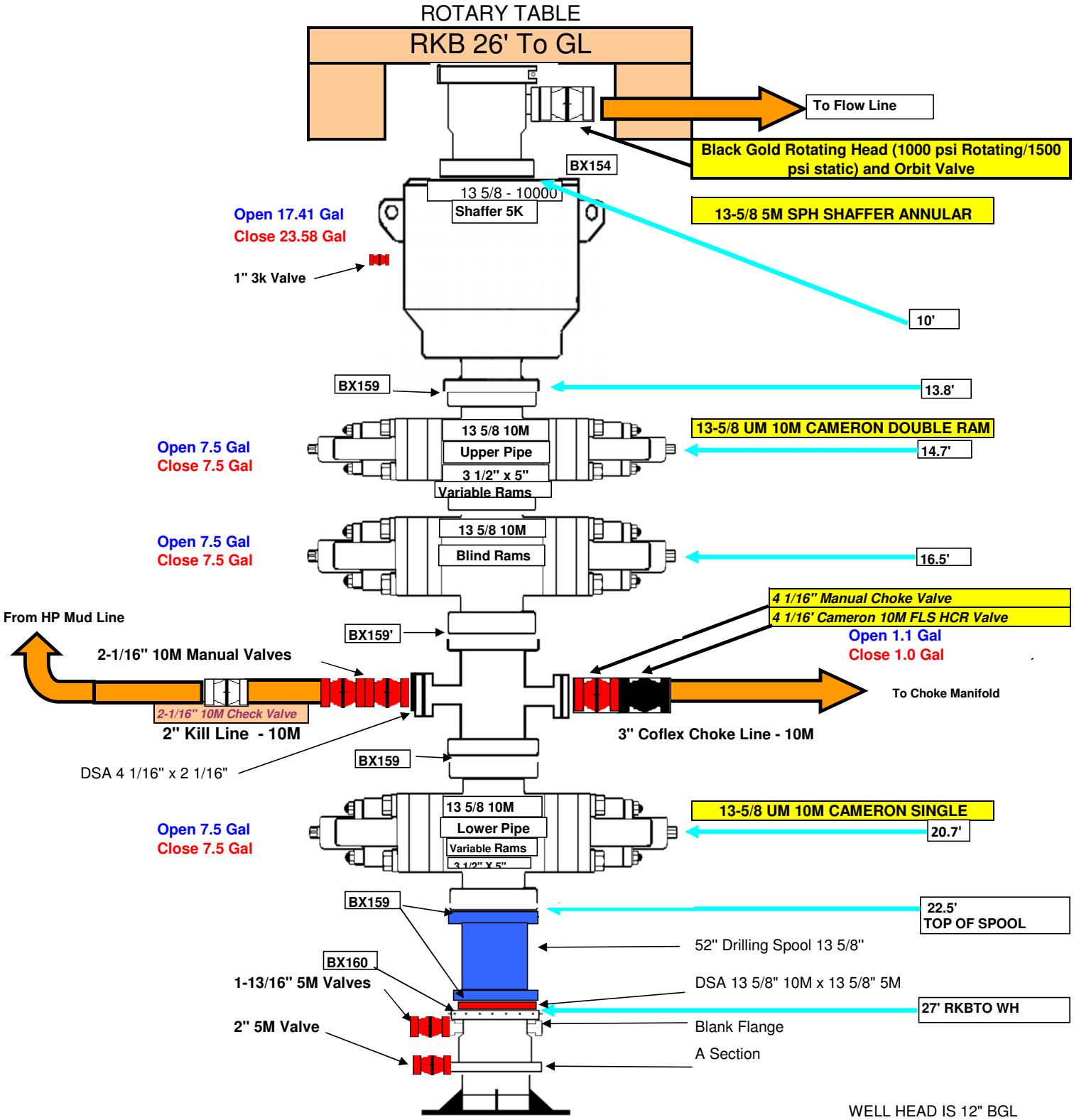
H_P650_Flex_Hose____Continental_Hose_PO_4500409659_SN_67255_20190307122906.pdf

CDEV_Multi_Bowl_Wellhead_Running_Procedure_3_String_Bonesprings_20191016125815.pdf

H&P650 – Flex 3
Choke Manifold – 10M



H&P 650


ROTARY TABLE
RKB 26' To GL
To Flow Line
Black Gold Rotating Head (1000 psi Rotating/1500 psi static) and Orbit Valve
BX154
13 5/8 - 10000
Shaffer 5K
13-5/8 5M SPH SHAFFER ANNULAR
Open 17.41 Gal
Close 23.58 Gal
1" 3k Valve
10'
BX159
13.8'
13 5/8 10M
Upper Pipe
3 1/2" x 5"
Variable Rams
13-5/8 UM 10M CAMERON DOUBLE RAM
14.7'
Open 7.5 Gal
Close 7.5 Gal
13 5/8 10M
Blind Rams
Open 7.5 Gal
Close 7.5 Gal
16.5'
4 1/16" Manual Choke Valve
4 1/16' Cameron 10M FLS HCR Valve
Open 1.1 Gal
Close 1.0 Gal
From HP Mud Line
BX159'
2-1/16" 10M Manual Valves
To Choke Manifold
2-1/16" 10M Check Valve
2" Kill Line - 10M
3" Coflex Choke Line - 10M
DSA 4 1/16" x 2 1/16"
BX159
13 5/8 10M
Lower Pipe
Variable Rams
3 1/2" X 5"
13-5/8 UM 10M CAMERON SINGLE
20.7'
Open 7.5 Gal
Close 7.5 Gal
BX159
22.5'
TOP OF SPOOL
52" Drilling Spool 13 5/8"
BX160
1-13/16" 5M Valves
DSA 13 5/8" 10M x 13 5/8" 5M
27' RKBTO WH
2" 5M Valve
Blank Flange
A Section
WELL HEAD IS 12" BGL

CASING ASSUMPTIONS WORKSHEET:

Centralizer Program:

Surface: - 3 welded bow spring centralizers, one on each of the bottom 3 joints, plus one on the shoe joint (4 minimum)
- No Cement baskets will be run

Production: - 1 welded bow spring centralizer on a stop ring 6' above float shoe
- 1 centralizer every other joint to the top of the tail cement
- 1 centralizer every 4 joints to 500' below the top of the lead cement
- The actual number and placement of centralizers will be determined from hole deviation and potential production zones. Centralizers will be run for maximum practical standoff and through all potential productive zones.

- All casing strings below the conductor shall be tested, prior to drilling out the casing shoe, to 0.22 psi/ft of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the internal yield pressure of the casing. If pressure declines more than 10 percent in 30 minutes, corrective action will be taken.

  No freshly hard banded pipe will be rotated in the surface casing

  - CENTENNIAL RESOURCE DEVELOPOMENT will not employ an air-drill rig for the surface casing. The casing shoe will be tested by drilling 5'-10' out from under the shoe and pressure testing to the maximum expected mud weight equivalent as shown in the mud program listed in the drilling plan.

CASING ASSUMPTIONS WORKSHEET:

Centralizer Program:

Surface: - 3 welded bow spring centralizers, one on each of the bottom 3 joints, plus one on the shoe joint (4 minimum)
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HOUSTON INTERNATIONAL SPECIALTY, INC
PREMIUM CONNECTIONS

Size	5.5
Grade	P110 RY
Weight	20

TCBC-HT

SeAH Steel

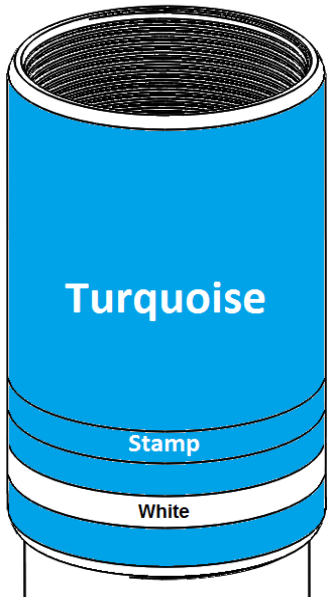
	Coupling and Pipe Dimensions (in)					
	Outer Diameter	Inner Diameter	Coupling Length	Make-up Loss	Wall Thickness	Drift Diameter
Coupling	6.300	5.383	8.250	4.125	0.361	4.653
Pipe		4.778				
Pin		4.778				

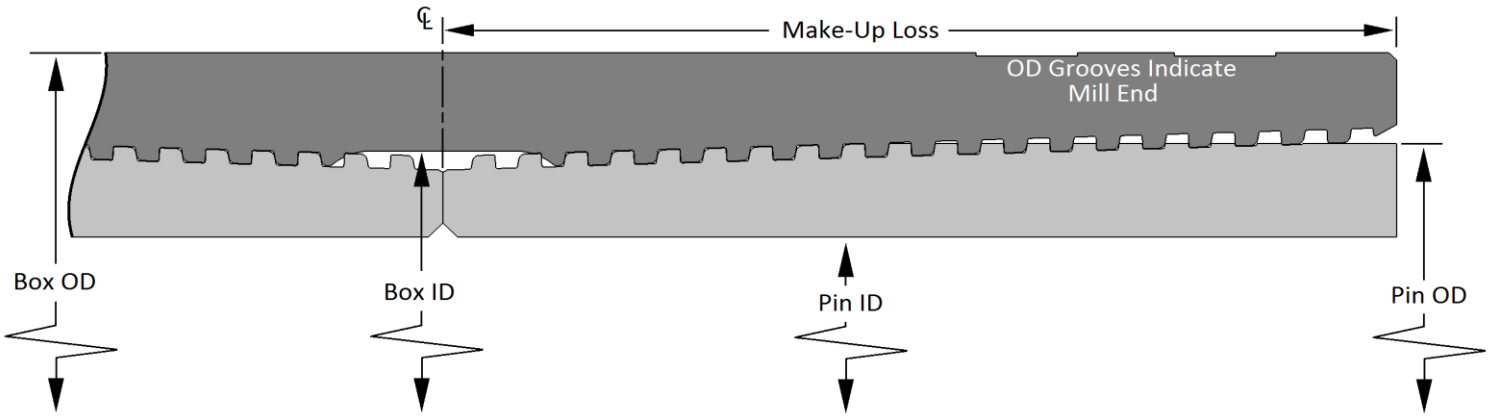
Torque Values (ft-lbs)				
Field End Make-Up			Max. Working Torque [1.]	Yield Torque
Minimum	Optimum [2.]	Maximum		
10,000	13,500	18,500	22,250	25,200

Yield Stress (x1000 lbs.)	
Tensile	Compressive
100%	100%

Maximum Pressure (psi)	
Internal	External
100%	100%

[1.] Max. Working Torque value is not to be exceeded during operation.
[2.] If Optimum Torque does not meet the Base of Triangle Stamp, M/U to the Base of Triangle.





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Rev 0

19996 Hickory Twig Way Spring, TX 77388
Phone: (281) 602-7550
Fax: (281) 602-7557

SeAH

5.5" 20# .361" P-110 Restricted Yield (RY)

Dimensions (Nominal)

Outside Diameter	5.500	in.
Wall	0.361	in.
Inside Diameter	4.778	in.
Drift	4.653	in.
Weight, T&C	20.000	lbs/ft
Weight, PE	19.830	lbs/ft

Performance Properties (Minimum)

Minimum Yield Strength	110000	psi
Maximum Yield Strength	125000	psi
Collapse, PE	11100	psi
Internal Yield Pressure		
PE	12630	psi
LTC	12360	psi
BTC	12360	psi
Yield Strength, Pipe Body	641	1000 lbs
Joint Strength		
LTC	548	1000 lbs
BTC	667	1000 lbs

Note: SeAH Steel has produced this specification sheet for general information only. SeAH does not assume liability or responsibility for any loss or injury resulting from the use of information or data contained herein. All applications for the material described are at the customer's own risk and responsibility.

CASING ASSUMPTIONS WORKSHEET:

Centralizer Program:

Surface: - 3 welded bow spring centralizers, one on each of the bottom 3 joints, plus one on the shoe joint (4 minimum)
- No Cement baskets will be run

Production: - 1 welded bow spring centralizer on a stop ring 6' above float shoe
- 1 centralizer every other joint to the top of the tail cement
- 1 centralizer every 4 joints to 500' below the top of the lead cement
- The actual number and placement of centralizers will be determined from hole deviation and potential production zones. Centralizers will be run for maximum practical standoff and through all potential productive zones.

- All casing strings below the conductor shall be tested, prior to drilling out the casing shoe, to 0.22 psi/ft of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the internal yield pressure of the casing. If pressure declines more than 10 percent in 30 minutes, corrective action will be taken.

  No freshly hard banded pipe will be rotated in the surface casing

  - CENTENNIAL RESOURCE DEVELOPOMENT will not employ an air-drill rig for the surface casing. The casing shoe will be tested by drilling 5'-10' out from under the shoe and pressure testing to the maximum expected mud weight equivalent as shown in the mud program listed in the drilling plan.

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Centralizer Program:

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HOUSTON INTERNATIONAL SPECIALTY, INC
PREMIUM CONNECTIONS

Size	5.5
Grade	P110 RY
Weight	20

TCBC-HT

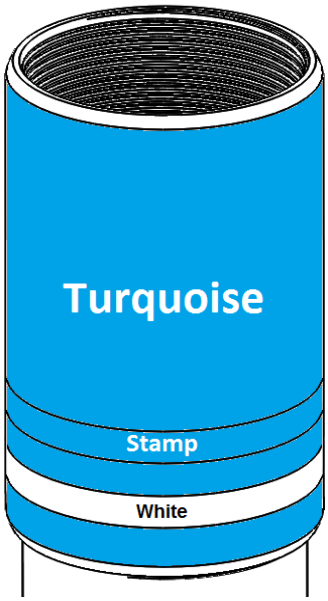
SeAH Steel

	Coupling and Pipe Dimensions (in)					
	Outer Diameter	Inner Diameter	Coupling Length	Make-up Loss	Wall Thickness	Drift Diameter
Coupling	6.300	5.383	8.250	4.125	0.361	4.653
Pipe		4.778				
Pin		4.778				

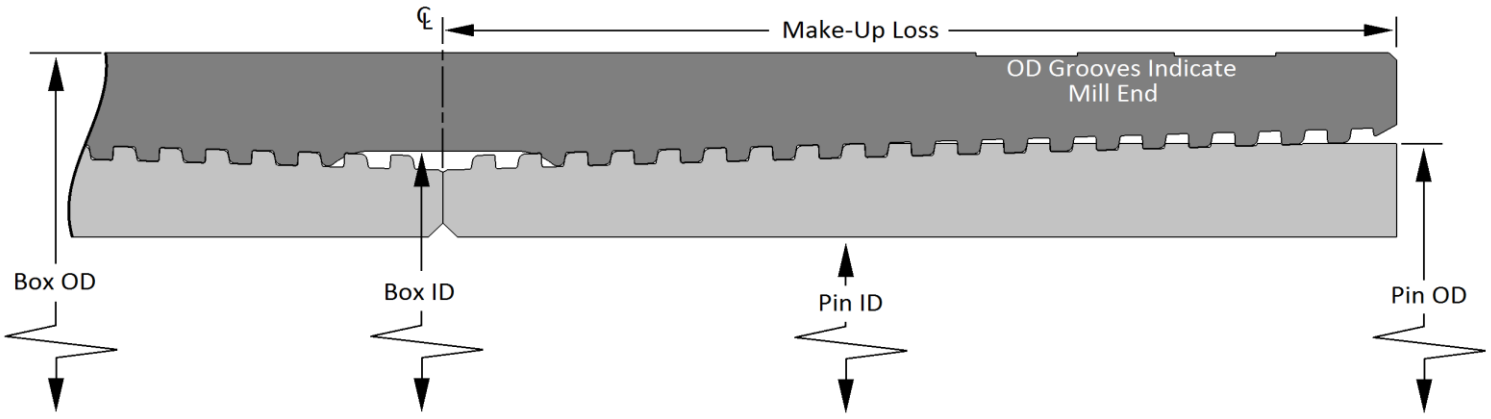
Torque Values (ft-lbs)				
Field End Make-Up			Max. Working Torque [1.]	Yield Torque
Minimum	Optimum [2.]	Maximum		
10,000	13,500	18,500	22,250	25,200

Yield Stress (x1000 lbs.)	
Tensile	Compressive
100%	100%

Maximum Pressure (psi)	
Internal	External
100%	100%



[1.] Max. Working Torque value is not to be exceeded during operation.
[2.] If Optimum Torque does not meet the Base of Triangle Stamp, M/U to the Base of Triangle.



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19996 Hickory Twig Way Spring, TX 77388
Phone: (281) 602-7550
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SeAH

5.5" 20# .361" P-110 Restricted Yield (RY)

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PE	12630	psi
LTC	12360	psi
BTC	12360	psi
Yield Strength, Pipe Body	641	1000 lbs
Joint Strength		
LTC	548	1000 lbs
BTC	667	1000 lbs

NEW MEXICO

LEA
RAIDER FEDERAL
RAIDER FEDERAL 401H

RAIDER FEDERAL 401H

Plan: MAGVAR - PWP0

Standard Planning Report

09 July, 2019

CENTENNIAL
RESOURCE DEVELOPMENT, INC

Project: RAIDER FEDERAL
Site: RAIDER FEDERAL
Wells: 401H - 302H - 402H
Design: MAGVAR - PWP0
RKB: 3531.00

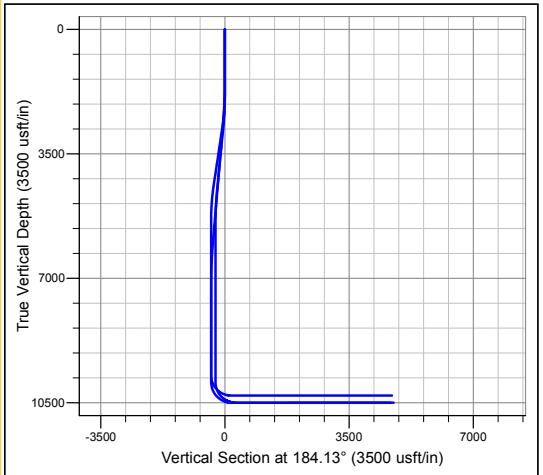
PROJECT DETAILS: LEA COUNTY

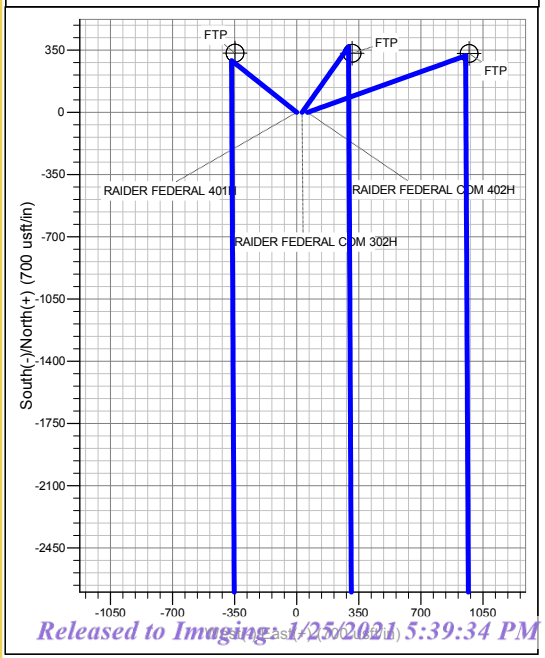
Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Zone 13N (108 W to 102 W)

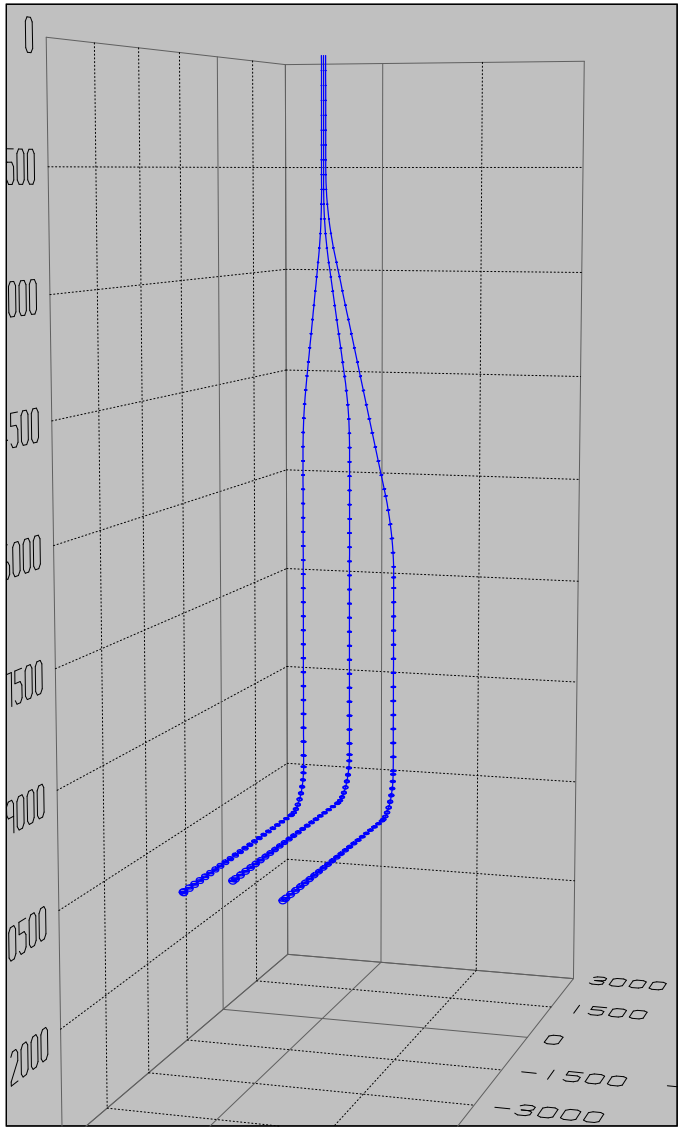
System Datum: Mean Sea Level

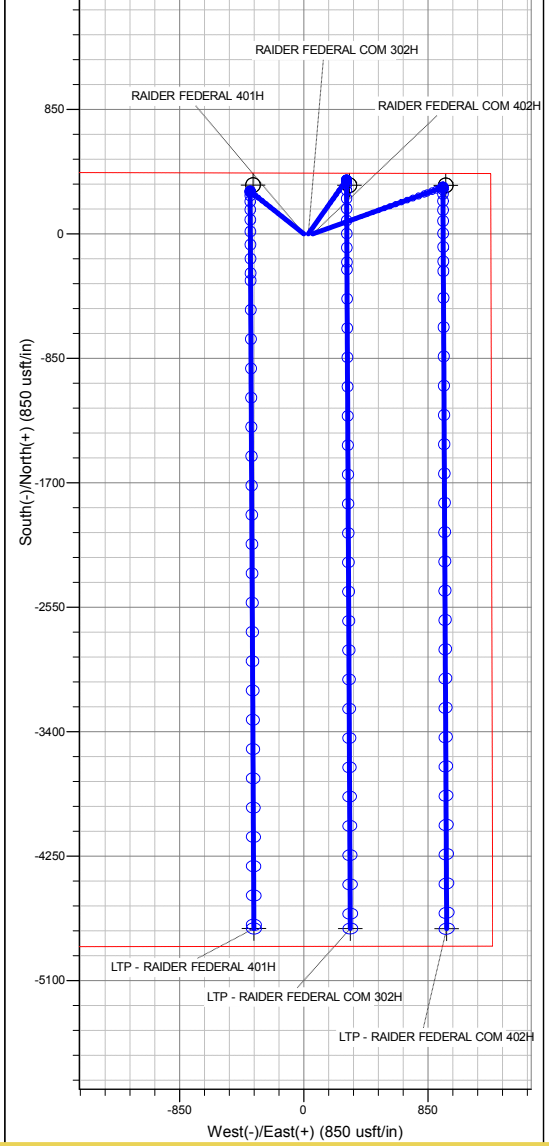
Azimuths to True North
Magnetic North: 6.68°

Magnetic Field
Strength: 47727.1snT
Dip Angle: 60.04°
Date: 7/9/2019
Model: IGRF2015









Planning Report

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well RAIDER FEDERAL 401H
Company:	NEW MEXICO	**TVD Reference:**	RKB = 3531 + 26.5 @ 3557.50usft
Project:	LEA	**MD Reference:**	RKB = 3531 + 26.5 @ 3557.50usft
Site:	RAIDER FEDERAL	**North Reference:**	True
Well:	RAIDER FEDERAL 401H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	RAIDER FEDERAL 401H		
Design:	MAGVAR - PWP0		

Project LEA

Map System:	Universal Transverse Mercator (US Survey Fee	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site RAIDER FEDERAL

Site Position:		**Northing:**	11,694,989.05 usft	**Latitude:**	32° 12' 32.793 N
From:	Map	**Easting:**	2,113,312.04 usft	**Longitude:**	103° 28' 14.154 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.82 °

Well RAIDER FEDERAL 401H

Well Position	**+N/-S**	0.00 usft	**Northing:**	11,694,989.05 usft	**Latitude:**	32° 12' 32.793 N
	+E/-W	0.00 usft	**Easting:**	2,113,312.04 usft	**Longitude:**	103° 28' 14.154 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,531.00 usft

Wellbore RAIDER FEDERAL 401H

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/9/2019	6.68	60.04	47,727.10445890

Design MAGVAR - PWP0

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	184.13

Plan Survey Tool Program **Date** 7/9/2019

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	15,324.65	MAGVAR - PWP0 (RAIDER FED	MWD+IFR1+MS OWSG MWD + IFR1 + Mult	

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,800.00	10.00	308.40	2,794.93	54.07	-68.22	1.00	1.00	0.00	308.40	
4,500.00	10.00	308.40	4,469.10	237.43	-299.56	0.00	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,464.03	291.50	-367.78	1.00	-1.00	0.00	180.00	
9,963.00	0.00	0.00	9,927.03	291.50	-367.78	0.00	0.00	0.00	0.00	
10,863.01	90.00	179.71	10,500.00	-281.46	-364.88	10.00	10.00	0.00	179.71	
15,325.29	90.00	179.71	10,500.00	-4,743.68	-342.15	0.00	0.00	0.00	0.00	LTP - RAIDER FEL

Planning Report

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well RAIDER FEDERAL 401H
Company:	NEW MEXICO	**TVD Reference:**	RKB = 3531 + 26.5 @ 3557.50usft
Project:	LEA	**MD Reference:**	RKB = 3531 + 26.5 @ 3557.50usft
Site:	RAIDER FEDERAL	**North Reference:**	True
Well:	RAIDER FEDERAL 401H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	RAIDER FEDERAL 401H		
Design:	MAGVAR - PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	1.00	308.40	1,899.99	0.54	-0.68	-0.49	1.00	1.00	0.00
2,000.00	2.00	308.40	1,999.96	2.17	-2.74	-1.97	1.00	1.00	0.00
2,100.00	3.00	308.40	2,099.86	4.88	-6.15	-4.42	1.00	1.00	0.00
2,200.00	4.00	308.40	2,199.68	8.67	-10.94	-7.86	1.00	1.00	0.00
2,300.00	5.00	308.40	2,299.37	13.54	-17.09	-12.28	1.00	1.00	0.00
2,400.00	6.00	308.40	2,398.90	19.50	-24.60	-17.68	1.00	1.00	0.00
2,500.00	7.00	308.40	2,498.26	26.53	-33.47	-24.05	1.00	1.00	0.00
2,600.00	8.00	308.40	2,597.40	34.64	-43.70	-31.40	1.00	1.00	0.00
2,700.00	9.00	308.40	2,696.30	43.82	-55.28	-39.73	1.00	1.00	0.00
2,800.00	10.00	308.40	2,794.93	54.07	-68.22	-49.02	1.00	1.00	0.00
2,900.00	10.00	308.40	2,893.41	64.85	-81.83	-58.80	0.00	0.00	0.00
3,000.00	10.00	308.40	2,991.89	75.64	-95.43	-68.58	0.00	0.00	0.00
3,100.00	10.00	308.40	3,090.37	86.43	-109.04	-78.36	0.00	0.00	0.00
3,200.00	10.00	308.40	3,188.85	97.21	-122.65	-88.14	0.00	0.00	0.00
3,300.00	10.00	308.40	3,287.33	108.00	-136.26	-97.92	0.00	0.00	0.00
3,400.00	10.00	308.40	3,385.82	118.78	-149.87	-107.70	0.00	0.00	0.00
3,500.00	10.00	308.40	3,484.30	129.57	-163.48	-117.47	0.00	0.00	0.00
3,600.00	10.00	308.40	3,582.78	140.36	-177.09	-127.25	0.00	0.00	0.00
3,700.00	10.00	308.40	3,681.26	151.14	-190.69	-137.03	0.00	0.00	0.00
3,800.00	10.00	308.40	3,779.74	161.93	-204.30	-146.81	0.00	0.00	0.00
3,900.00	10.00	308.40	3,878.22	172.72	-217.91	-156.59	0.00	0.00	0.00
4,000.00	10.00	308.40	3,976.70	183.50	-231.52	-166.37	0.00	0.00	0.00
4,100.00	10.00	308.40	4,075.18	194.29	-245.13	-176.15	0.00	0.00	0.00
4,200.00	10.00	308.40	4,173.66	205.07	-258.74	-185.93	0.00	0.00	0.00
4,300.00	10.00	308.40	4,272.14	215.86	-272.35	-195.71	0.00	0.00	0.00
4,400.00	10.00	308.40	4,370.62	226.65	-285.96	-205.49	0.00	0.00	0.00
4,500.00	10.00	308.40	4,469.10	237.43	-299.56	-215.27	0.00	0.00	0.00
4,600.00	9.00	308.40	4,567.73	247.68	-312.50	-224.56	1.00	-1.00	0.00
4,700.00	8.00	308.40	4,666.63	256.86	-324.08	-232.88	1.00	-1.00	0.00
4,800.00	7.00	308.40	4,765.77	264.97	-334.31	-240.23	1.00	-1.00	0.00
4,900.00	6.00	308.40	4,865.13	272.00	-343.18	-246.61	1.00	-1.00	0.00
5,000.00	5.00	308.40	4,964.67	277.96	-350.69	-252.01	1.00	-1.00	0.00
5,100.00	4.00	308.40	5,064.36	282.83	-356.84	-256.43	1.00	-1.00	0.00
5,200.00	3.00	308.40	5,164.17	286.62	-361.63	-259.86	1.00	-1.00	0.00
5,300.00	2.00	308.40	5,264.08	289.33	-365.05	-262.32	1.00	-1.00	0.00

Planning Report

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well RAIDER FEDERAL 401H
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Wellbore:	RAIDER FEDERAL 401H		
Design:	MAGVAR - PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	1.00	308.40	5,364.04	290.96	-367.10	-263.79	1.00	-1.00	0.00
5,500.00	0.00	0.00	5,464.03	291.50	-367.78	-264.29	1.00	-1.00	0.00
5,600.00	0.00	0.00	5,564.03	291.50	-367.78	-264.29	0.00	0.00	0.00
5,700.00	0.00	0.00	5,664.03	291.50	-367.78	-264.29	0.00	0.00	0.00
5,800.00	0.00	0.00	5,764.03	291.50	-367.78	-264.29	0.00	0.00	0.00
5,900.00	0.00	0.00	5,864.03	291.50	-367.78	-264.29	0.00	0.00	0.00
6,000.00	0.00	0.00	5,964.03	291.50	-367.78	-264.29	0.00	0.00	0.00
6,100.00	0.00	0.00	6,064.03	291.50	-367.78	-264.29	0.00	0.00	0.00
6,200.00	0.00	0.00	6,164.03	291.50	-367.78	-264.29	0.00	0.00	0.00
6,300.00	0.00	0.00	6,264.03	291.50	-367.78	-264.29	0.00	0.00	0.00
6,400.00	0.00	0.00	6,364.03	291.50	-367.78	-264.29	0.00	0.00	0.00
6,500.00	0.00	0.00	6,464.03	291.50	-367.78	-264.29	0.00	0.00	0.00
6,600.00	0.00	0.00	6,564.03	291.50	-367.78	-264.29	0.00	0.00	0.00
6,700.00	0.00	0.00	6,664.03	291.50	-367.78	-264.29	0.00	0.00	0.00
6,800.00	0.00	0.00	6,764.03	291.50	-367.78	-264.29	0.00	0.00	0.00
6,900.00	0.00	0.00	6,864.03	291.50	-367.78	-264.29	0.00	0.00	0.00
7,000.00	0.00	0.00	6,964.03	291.50	-367.78	-264.29	0.00	0.00	0.00
7,100.00	0.00	0.00	7,064.03	291.50	-367.78	-264.29	0.00	0.00	0.00
7,200.00	0.00	0.00	7,164.03	291.50	-367.78	-264.29	0.00	0.00	0.00
7,300.00	0.00	0.00	7,264.03	291.50	-367.78	-264.29	0.00	0.00	0.00
7,400.00	0.00	0.00	7,364.03	291.50	-367.78	-264.29	0.00	0.00	0.00
7,500.00	0.00	0.00	7,464.03	291.50	-367.78	-264.29	0.00	0.00	0.00
7,600.00	0.00	0.00	7,564.03	291.50	-367.78	-264.29	0.00	0.00	0.00
7,700.00	0.00	0.00	7,664.03	291.50	-367.78	-264.29	0.00	0.00	0.00
7,800.00	0.00	0.00	7,764.03	291.50	-367.78	-264.29	0.00	0.00	0.00
7,900.00	0.00	0.00	7,864.03	291.50	-367.78	-264.29	0.00	0.00	0.00
8,000.00	0.00	0.00	7,964.03	291.50	-367.78	-264.29	0.00	0.00	0.00
8,100.00	0.00	0.00	8,064.03	291.50	-367.78	-264.29	0.00	0.00	0.00
8,200.00	0.00	0.00	8,164.03	291.50	-367.78	-264.29	0.00	0.00	0.00
8,300.00	0.00	0.00	8,264.03	291.50	-367.78	-264.29	0.00	0.00	0.00
8,400.00	0.00	0.00	8,364.03	291.50	-367.78	-264.29	0.00	0.00	0.00
8,500.00	0.00	0.00	8,464.03	291.50	-367.78	-264.29	0.00	0.00	0.00
8,600.00	0.00	0.00	8,564.03	291.50	-367.78	-264.29	0.00	0.00	0.00
8,700.00	0.00	0.00	8,664.03	291.50	-367.78	-264.29	0.00	0.00	0.00
8,800.00	0.00	0.00	8,764.03	291.50	-367.78	-264.29	0.00	0.00	0.00
8,900.00	0.00	0.00	8,864.03	291.50	-367.78	-264.29	0.00	0.00	0.00
9,000.00	0.00	0.00	8,964.03	291.50	-367.78	-264.29	0.00	0.00	0.00
9,100.00	0.00	0.00	9,064.03	291.50	-367.78	-264.29	0.00	0.00	0.00
9,200.00	0.00	0.00	9,164.03	291.50	-367.78	-264.29	0.00	0.00	0.00
9,300.00	0.00	0.00	9,264.03	291.50	-367.78	-264.29	0.00	0.00	0.00
9,400.00	0.00	0.00	9,364.03	291.50	-367.78	-264.29	0.00	0.00	0.00
9,500.00	0.00	0.00	9,464.03	291.50	-367.78	-264.29	0.00	0.00	0.00
9,600.00	0.00	0.00	9,564.03	291.50	-367.78	-264.29	0.00	0.00	0.00
9,700.00	0.00	0.00	9,664.03	291.50	-367.78	-264.29	0.00	0.00	0.00
9,800.00	0.00	0.00	9,764.03	291.50	-367.78	-264.29	0.00	0.00	0.00
9,900.00	0.00	0.00	9,864.03	291.50	-367.78	-264.29	0.00	0.00	0.00
9,963.00	0.00	0.00	9,927.03	291.50	-367.78	-264.29	0.00	0.00	0.00
10,000.00	3.70	179.71	9,964.01	290.31	-367.78	-263.10	10.00	10.00	0.00
10,100.00	13.70	179.71	10,062.73	275.20	-367.70	-248.03	10.00	10.00	0.00
10,200.00	23.70	179.71	10,157.33	243.18	-367.54	-216.11	10.00	10.00	0.00
10,300.00	33.70	179.71	10,244.94	195.22	-367.29	-168.29	10.00	10.00	0.00
10,400.00	43.70	179.71	10,322.88	132.78	-366.98	-106.03	10.00	10.00	0.00
10,500.00	53.70	179.71	10,388.80	57.75	-366.60	-31.22	10.00	10.00	0.00
10,600.00	63.70	179.71	10,440.69	-27.59	-366.17	53.86	10.00	10.00	0.00

Planning Report

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well RAIDER FEDERAL 401H
Company:	NEW MEXICO	**TVD Reference:**	RKB = 3531 + 26.5 @ 3557.50usft
Project:	LEA	**MD Reference:**	RKB = 3531 + 26.5 @ 3557.50usft
Site:	RAIDER FEDERAL	**North Reference:**	True
Well:	RAIDER FEDERAL 401H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	RAIDER FEDERAL 401H		
Design:	MAGVAR - PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,700.00	73.70	179.71	10,476.97	-120.64	-365.70	146.63	10.00	10.00	0.00
10,800.00	83.70	179.71	10,496.54	-218.57	-365.20	244.28	10.00	10.00	0.00
10,863.01	90.00	179.71	10,500.00	-281.46	-364.88	306.98	10.00	10.00	0.00
10,900.00	90.00	179.71	10,500.00	-318.45	-364.69	343.86	0.00	0.00	0.00
11,000.00	90.00	179.71	10,500.00	-418.44	-364.19	443.56	0.00	0.00	0.00
11,100.00	90.00	179.71	10,500.00	-518.44	-363.68	543.26	0.00	0.00	0.00
11,200.00	90.00	179.71	10,500.00	-618.44	-363.18	642.97	0.00	0.00	0.00
11,300.00	90.00	179.71	10,500.00	-718.44	-362.67	742.67	0.00	0.00	0.00
11,400.00	90.00	179.71	10,500.00	-818.44	-362.16	842.37	0.00	0.00	0.00
11,500.00	90.00	179.71	10,500.00	-918.44	-361.66	942.08	0.00	0.00	0.00
11,600.00	90.00	179.71	10,500.00	-1,018.44	-361.15	1,041.78	0.00	0.00	0.00
11,700.00	90.00	179.71	10,500.00	-1,118.44	-360.64	1,141.48	0.00	0.00	0.00
11,800.00	90.00	179.71	10,500.00	-1,218.43	-360.14	1,241.19	0.00	0.00	0.00
11,900.00	90.00	179.71	10,500.00	-1,318.43	-359.63	1,340.89	0.00	0.00	0.00
12,000.00	90.00	179.71	10,500.00	-1,418.43	-359.13	1,440.59	0.00	0.00	0.00
12,100.00	90.00	179.71	10,500.00	-1,518.43	-358.62	1,540.30	0.00	0.00	0.00
12,200.00	90.00	179.71	10,500.00	-1,618.43	-358.11	1,640.00	0.00	0.00	0.00
12,300.00	90.00	179.71	10,500.00	-1,718.43	-357.61	1,739.70	0.00	0.00	0.00
12,400.00	90.00	179.71	10,500.00	-1,818.43	-357.10	1,839.41	0.00	0.00	0.00
12,500.00	90.00	179.71	10,500.00	-1,918.43	-356.60	1,939.11	0.00	0.00	0.00
12,600.00	90.00	179.71	10,500.00	-2,018.42	-356.09	2,038.81	0.00	0.00	0.00
12,700.00	90.00	179.71	10,500.00	-2,118.42	-355.58	2,138.51	0.00	0.00	0.00
12,800.00	90.00	179.71	10,500.00	-2,218.42	-355.08	2,238.22	0.00	0.00	0.00
12,900.00	90.00	179.71	10,500.00	-2,318.42	-354.57	2,337.92	0.00	0.00	0.00
13,000.00	90.00	179.71	10,500.00	-2,418.42	-354.07	2,437.62	0.00	0.00	0.00
13,100.00	90.00	179.71	10,500.00	-2,518.42	-353.56	2,537.33	0.00	0.00	0.00
13,200.00	90.00	179.71	10,500.00	-2,618.42	-353.05	2,637.03	0.00	0.00	0.00
13,300.00	90.00	179.71	10,500.00	-2,718.42	-352.55	2,736.73	0.00	0.00	0.00
13,400.00	90.00	179.71	10,500.00	-2,818.41	-352.04	2,836.44	0.00	0.00	0.00
13,500.00	90.00	179.71	10,500.00	-2,918.41	-351.53	2,936.14	0.00	0.00	0.00
13,600.00	90.00	179.71	10,500.00	-3,018.41	-351.03	3,035.84	0.00	0.00	0.00
13,700.00	90.00	179.71	10,500.00	-3,118.41	-350.52	3,135.55	0.00	0.00	0.00
13,800.00	90.00	179.71	10,500.00	-3,218.41	-350.02	3,235.25	0.00	0.00	0.00
13,900.00	90.00	179.71	10,500.00	-3,318.41	-349.51	3,334.95	0.00	0.00	0.00
14,000.00	90.00	179.71	10,500.00	-3,418.41	-349.00	3,434.66	0.00	0.00	0.00
14,100.00	90.00	179.71	10,500.00	-3,518.40	-348.50	3,534.36	0.00	0.00	0.00
14,200.00	90.00	179.71	10,500.00	-3,618.40	-347.99	3,634.06	0.00	0.00	0.00
14,300.00	90.00	179.71	10,500.00	-3,718.40	-347.49	3,733.77	0.00	0.00	0.00
14,400.00	90.00	179.71	10,500.00	-3,818.40	-346.98	3,833.47	0.00	0.00	0.00
14,500.00	90.00	179.71	10,500.00	-3,918.40	-346.47	3,933.17	0.00	0.00	0.00
14,600.00	90.00	179.71	10,500.00	-4,018.40	-345.97	4,032.88	0.00	0.00	0.00
14,700.00	90.00	179.71	10,500.00	-4,118.40	-345.46	4,132.58	0.00	0.00	0.00
14,800.00	90.00	179.71	10,500.00	-4,218.40	-344.95	4,232.28	0.00	0.00	0.00
14,900.00	90.00	179.71	10,500.00	-4,318.39	-344.45	4,331.99	0.00	0.00	0.00
15,000.00	90.00	179.71	10,500.00	-4,418.39	-343.94	4,431.69	0.00	0.00	0.00
15,100.00	90.00	179.71	10,500.00	-4,518.39	-343.44	4,531.39	0.00	0.00	0.00
15,200.00	90.00	179.71	10,500.00	-4,618.39	-342.93	4,631.09	0.00	0.00	0.00
15,300.00	90.00	179.71	10,500.00	-4,718.39	-342.42	4,730.80	0.00	0.00	0.00
15,325.29	90.00	179.71	10,500.00	-4,743.68	-342.15	4,756.00	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well RAIDER FEDERAL 401H
Company:	NEW MEXICO	**TVD Reference:**	RKB = 3531 + 26.5 @ 3557.50usft
Project:	LEA	**MD Reference:**	RKB = 3531 + 26.5 @ 3557.50usft
Site:	RAIDER FEDERAL	**North Reference:**	True
Well:	RAIDER FEDERAL 401H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	RAIDER FEDERAL 401H		
Design:	MAGVAR - PWP0		

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
LTP - RAIDER FEDEI - plan hits target center - Point	0.00	0.00	10,500.00	-4,743.68	-342.15	11,690,240.98	2,113,037.43	32° 11' 45.847 N	103° 28' 18.136 W
FTP - RAIDER FEDEI - plan misses target center by 268.33usft at 10400.00usft MD (10322.88 TVD, 132.78 N, -366.98 E) - Circle (radius 50.00)	0.00	0.00	10,500.00	333.47	-348.26	11,695,317.53	2,112,959.07	32° 12' 36.094 N	103° 28' 18.208 W

Centennial Resource Development
New Mexico Multi-Well Pad Drilling
Batch Setting Procedures

➢ Avalon and Bone Springs Formations

13-3/8" Surface Casing - CRD intends to preset 13-3/8" casing to a depth approved in the APD. 17-1/2" Surface Holes will be batch drilled by a Surface Preset 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 17-1/2" Surface hole to Approved Depth with Surface Preset Rig and perform wellbore cleanup cycles. Trip out and rack back drilling BHA.
2. Run and land 13-3/8" 54.5# J55 BTC casing to depth approved in APD.
3. Cement 13-3/8" casing with cement to surface and floats holding.
4. Cut / Dress 20" Conductor and 13-3/8" casing as needed, weld on Cameron Multi-bowl system with baseplate supported by 20" conductor (see Illustration 1-1 Below). Weld performed per Cameron weld procedure.
5. Test Weld to 70% of 13-3/8" casing collapse or ~ 790psi.
6. Install nightcap with Pressure Gauge on wellhead. Nightcap is shown on final wellhead Stack up Illustration #2-2 page 3.
7. Skid Rig to adjacent well to drill Surface hole.
8. Surface casing test will be performed by the Big 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.

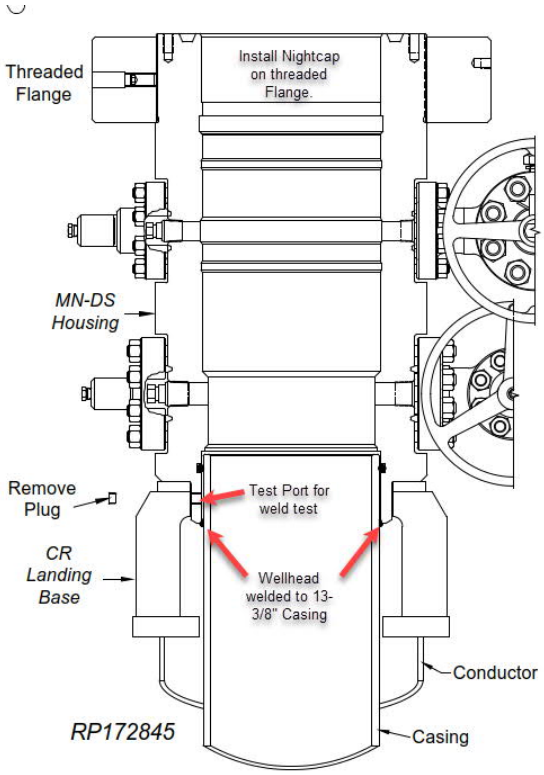


Illustration 1-1

- Intermediate and Production Casing – For all subsequent Intermediate and Production Casing Strings, the Big Rig will remove the nightcap and install and test BOPE. Prior to drill out the 13-3/8" Casing will be tested to 0.22psi/ft or 1500psi whichever is greater. The well will be drilled below 13-3/8" to its intended final TD in the Avalon or Bonesprings formations. Batch drilling will not be executed for casing strings below the 13-3/8". Appropriate notifications will be made prior Testing BOPE, and prior to running/cementing all casing strings. The

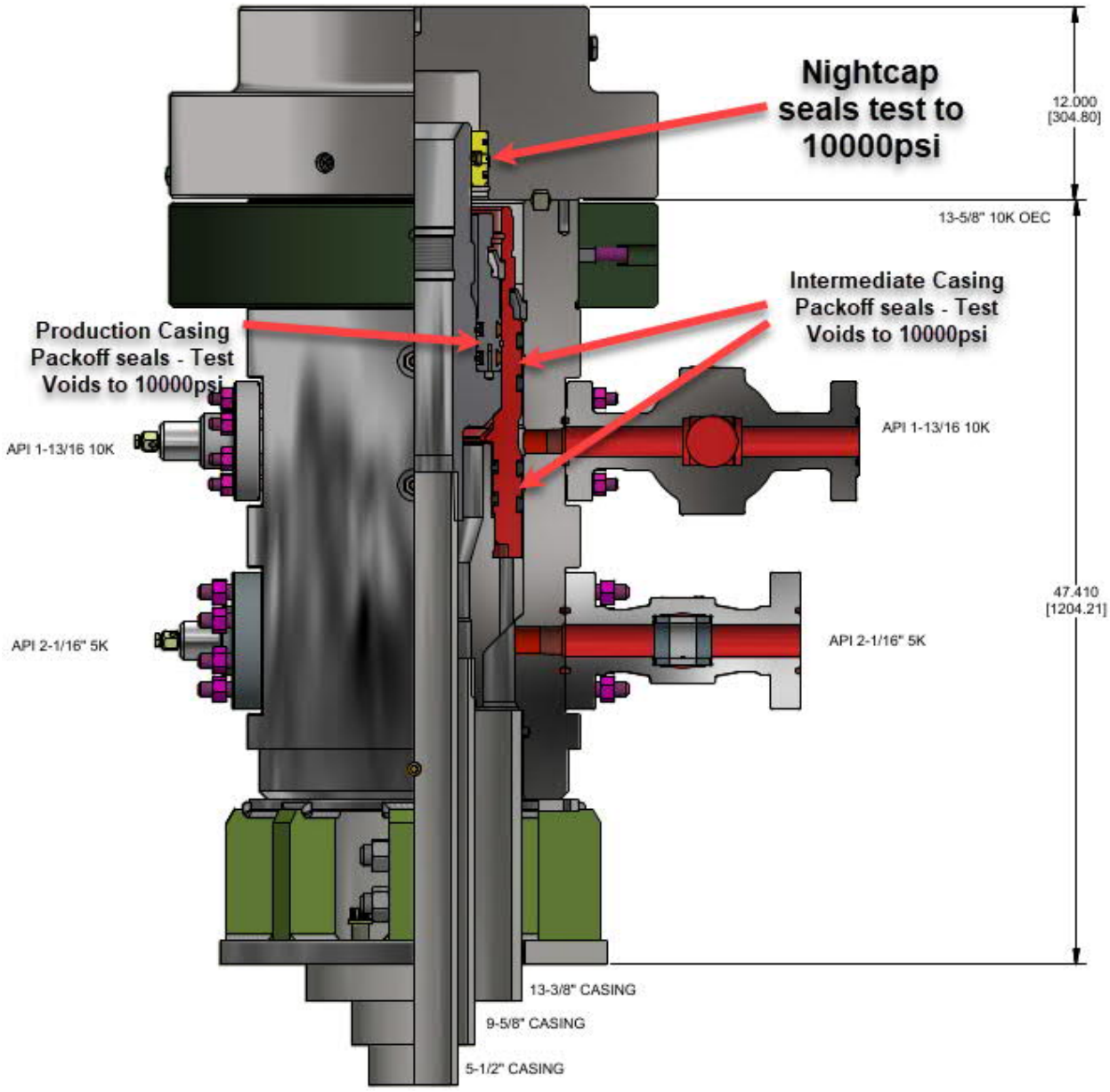
➢ Wolfcamp Formations

13-3/8" Surface Casing - CRD intends to preset 13-3/8" casing to a depth approved in the APD. Surface Holes will be batch set by a Surface Preset 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 17-1/2" Surface hole to Approved Depth with Surface Preset Rig and perform wellbore cleanup cycles. Trip out and rack back drilling BHA.
2. Run and land 13-3/8" 54.5# J55 BTC casing to depth approved in APD.
3. Cement 13-3/8" casing with cement to surface and floats holding.
4. Cut / Dress 20" Conductor and 13-3/8" casing as needed, weld on Cameron Multi-bowl system with baseplate supported by 20" conductor (see Illustration 1-1). Weld performed per Cameron weld procedure.
5. Test Weld to 70% of 13-3/8" casing collapse or ~ 790psi.
6. Install nightcap with Pressure Gauge on wellhead. Nightcap is shown on final wellhead Stack up Illustration #2-2 on page 3.
7. Subsequent casing test will be performed by the Big 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.

Intermediate Casing – CRD intends to Batch set all intermediate casing strings to a depth approved in the APD, typically set 100' above KOP in the 3rd Bonesprings Carbonate. For the last intermediate section drilled on pad, the associated production interval will immediately follow. Appropriate notifications will be made prior Testing BOPE, and prior to running/cementing all casing strings.

1. Big 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 13-3/8" 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 10000 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.



WITH CAP

Illustration 2-2

Production Casing – CRD intends to Batch set all Production casings, except for the last intermediate hole. In this case the production interval will immediately follow the intermediate section on that well. Appropriate notifications will be made prior Testing BOPE, and prior to running/cementing all casing strings.

1. Big 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 5-1/2" Production Casing.
6. Remove wear bushing then run 5-1/2" production casing to TD landing casing mandrel in wellhead.
7. Cement 5-1/2" Production string to surface with floats holding.
8. Run in with wash tool and wash wellhead area – install pack-off and test void to 10000psi for 15 minutes.
9. Install BPV in 5-1/2" mandrel hanger – Nipple down BOPE and install nightcap.
10. Test nightcap void to 10000psi for 30 minutes per illustration 2-2 page 3.
11. Skid rig to adjacent well on pad to drill production hole.

Continental
ContiTech

CONTITECH RUBBER Industrial Kft.	No:QC-DB- 210/ 2014
	Page: 9 / 113

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE					CERT. N°:	504	
PURCHASER:	ContiTech Oil & Marine Corp.				P.O. N°:	4500409659	
CONTITECH RUBBER order N°:	538236		HOSE TYPE:	3" ID	Choke and Kill Hose		
HOSE SERIAL N°:	67255		NOMINAL / ACTUAL LENGTH:		10,67 m / 10,77 m		
W.P. 68,9 MPa	10000 psi		T.P. 103,4 MPa	15000 psi	Duration:	60	min.

Pressure test with water at
ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.
→ 10 mm = 20 MPa

COUPLINGS Type	Serial N°		Quality	Heat N°
3" coupling with	9251	9254	AISI 4130	A0579N
4 1/16" 10K API b.w. Flange end			AISI 4130	035608

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

Temperature rate:"B"

All metal parts are flawless

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

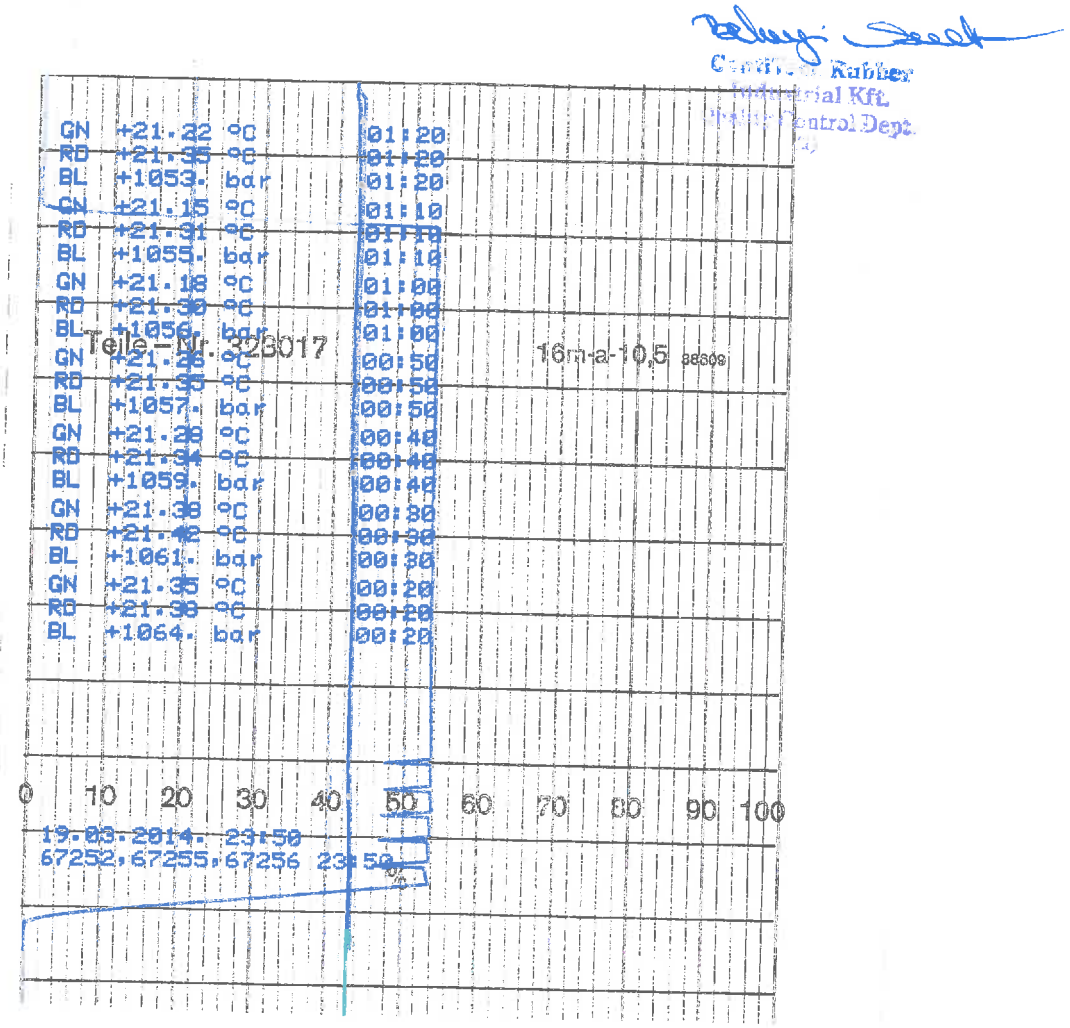
STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes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

COUNTRY OF ORIGIN HUNGARY/EU

Date:	Inspector	Quality Control
20. March 2014.		ContiTech Rubber Industrial Kft. Quality Control Dept.

ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE No: 501, 504, 505

Page: 1 / 1

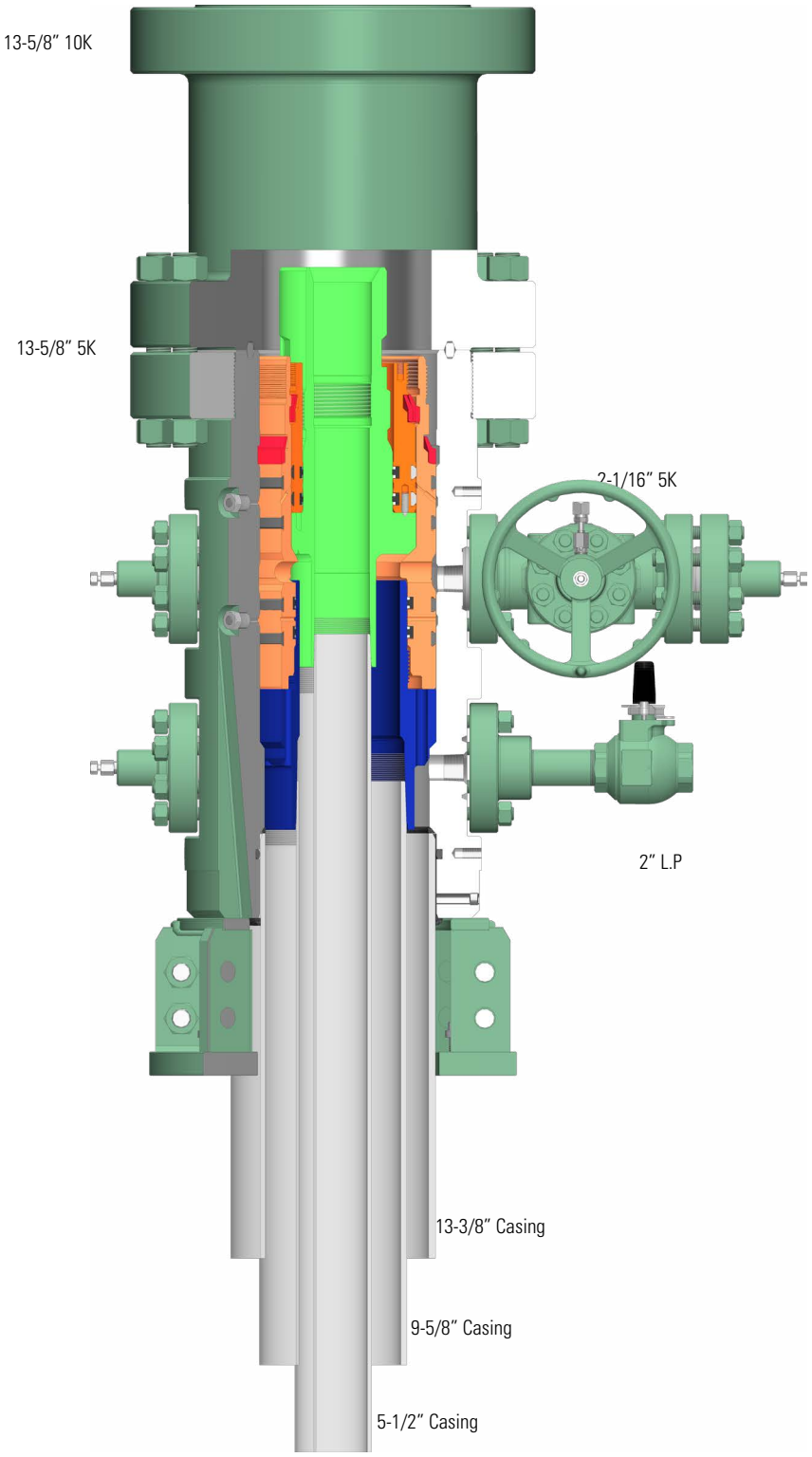


Hose Data Sheet

CRI Order No.	538236
Customer	ContiTech Oil & Marine Corp.
Customer Order No	4500409659
Item No.	1
Hose Type	Flexible Hose
Standard	**API SPEC 16 C**
Inside dia in inches	3
Length	35 ft
Type of coupling one end	FLANGE 4.1/16" 10K API SPEC 6A TYPE 6BX FLANGE C/W BX155 R.GR.SOUR
Type of coupling other end	FLANGE 4.1/16" 10K API SPEC 6A TYPE 6BX FLANGE C/W BX155 R.GR.SOUR
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St.steel outer wrap
Internal stripwound tube	No
Lining	OIL + GAS RESISTANT SOUR
Safety clamp	No
Lifting collar	No
Element C	No
Safety chain	No
Safety wire rope	No
Max.design temperature [°C]	100
Min.design temperature [°C]	-20
Min. Bend Radius operating [m]	0,90
Min. Bend Radius storage [m]	0,90
Electrical continuity	The Hose is electrically continuous
Type of packing	WOODEN CRATE ISPM-15

Centennial Wellhead Running Procedure 3 String Bone Springs Design

1. Drill 17-1/2" surface hole to Total Depth and perform wellbore cleanup cycles.
2. Remove wear bushing then Run and land 13-3/8" casing with mandrel hanger in wellhead.
3. Cement 13-3/8" casing – cement to surface.
4. Dress Conductor and 13-3/8" casing as needed, weld on Cameron Multi-bowl system with baseplate supported by 20" conductor.
5. Test Weld to 70% of 13-3/8" casing collapse.
6. Nipple up and test BOPE with test plug per Onshore Order 2..
7. Test casing per COA WOC timing (.22 psi/ft or 1500 psi whichever is greater) - not to exceed 70% casing burst.
8. Install wear bushing then drillout 13-3/8" shoetrack plus 20' and conduct FIT to minimum of the MW equivalent anticipated to control the formation pressure to the next casing point.
9. Drill 12-1/4" Intermediate hole to 9-5/8" casing point. (Base Capitan Reef).
10. Remove wear bushing then Run and land 9-5/8" Intermediate with mandrel hanger in wellhead.
11. Cement 9-5/8 casing – cement to surface.
12. Washout stack, Run wash tool in wellhead and wash hanger and packoff setting area.
13. Install packoff and test to 5000 psi for 15 minutes.
    a. Test casing per COA WOC timing (.22 psi/ft or 1500 psi whichever is greater) - not to exceed 70% casing burst.
14. Install wear bushing then drillout 9-5/8" shoetrack plus 20' and conduct FIT to minimum MW equivalent to control the formation pressure to TD of well.
15. Drill 8-3/4" Vertical hole to KOP – Trip out for Curve BHA.
16. Drill 8-3/4" Curve, landing in production interval – Trip for Lateral BHA.
17. Drill 8-1/2" Lateral to Permitted BHL, perform cleanup cycles and trip out to run 5-1/2" Production Casing.
18. Remove wear bushing then run 5-1/2" production casing to TD landing casing mandrel in wellhead.
19. Cement 5-1/2" Production string to surface.
20. Run in with wash tool and wash wellhead area – install packoff and test to 5000psi for 15 minutes.
21. Install BPV in 5-1/2" mandrel hanger – Nipple down BOPE and install nightcap.
22. Test nightcap void to 5000psi for 30 minutes.



CENTENNIAL
RESOURCE DEVELOPMENT, INC

CAMERON CONFIDENTIAL INFORMATION			
DO NOT SCALE		CAMERON A Schlumberger Company	Surface Systems
Drawn by: C.Moore	Date: 7/1/19		
Checked by: V.Atwell	Date: 7/1/19	13-5/8" 10k MN-DS	Rev: 02
Drawing No: 1655807-A			

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

SUPO Data Report
06/10/2020

APD ID: 10400049567 **Submission Date:** 10/17/2019

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

RAIDER_FEDERAL_COM_Existing_Road_plats_20191016092937.pdf

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

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Existing_Road_Improvement_20180920102027.pdf

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

RAIDER_FEDERAL_COM_Access_Road_maps_20191016093515.pdf
RAIDER_FEDERAL_CTB_New_Road_PLATS_20191016093530.pdf

New road type: RESOURCE

Length: 796 Feet **Width (ft.):** 65

Max slope (%): 2 **Max grade (%):** 8

Army Corp of Engineers (ACOE) permit required? N

ACOE Permit Number(s):

New road travel width: 20

New road access erosion control: Drainage and erosion will be constantly monitored to prevent compromising the road integrity and to protect the surrounding native topography

New road access plan or profile prepared? N

New road access plan attachment:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Access road engineering design? N

Access road engineering design attachment:

Turnout? N

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 4

Offsite topsoil source description:

Onsite topsoil removal process: Equipment will be used to strip 4 inches in depth and stockpile, utilizing berms for run-off

Access other construction information:

Access miscellaneous information:

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

Drainage Control

New road drainage crossing: CULVERT

Drainage Control comments: Will be monitored and repaired as necessary

Road Drainage Control Structures (DCS) description: Will be monitored and repaired as necessary

Road Drainage Control Structures (DCS) attachment:

TYPICAL_ACCESS_CROSS_SECTIONS_20180920102337.pdf

Access Additional Attachments

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

RAIDER_FEDERAL_COM_Well_Proximity_Map_20191016095606.pdf
Raider_Federal_Com_302H_Existing_Wells_list_20191016095910.xlsx

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Handles/Separates Gas, Oil, and Water

Production Facilities map:

RAIDER_FEDERAL_CTB___Location_Layout_PLATS_20191016100045.pdf
Raider_Federal_401H_302H_402H_Comingle_FAC_Layout_20191016100023.pdf

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: GW WELL

Water source use type: OTHER **Describe use type:** 3rd party procurement for construc control

Source latitude: **Source longitude:**

Source datum:

Water source permit type: PRIVATE CONTRACT

Water source transport method: PIPELINE

Source land ownership: PRIVATE

Source transportation land ownership: OTHER **Describe transportation land ownership:** Private

Water source volume (barrels): 450000 **Source volume (acre-feet):** 58.00189335

Source volume (gal): 18900000

Water source and transportation map:

water_route___Raider_Fed_20191016100512.pdf

Water source comments: Temporary surface lines will be used to transport water for drilling and completion operations from private pit to Raider development. Sec 16, T24S-R34E, NENE.
New water well? N

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: Caliche will be hauled from the existing Quail Ranch fee pit in NW4 NE4 Section 6-T25S-R35E. Pit has been identified for use in the attached exhibit. Any native caliche on the proposed site can be used by "flipping" the location and using all native soils.

Construction Materials source location attachment:

caliche_route___Raider_Fed_20191016100825.pdf

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Brine water based drilling fluid

Amount of waste: 1500 barrels

Waste disposal frequency : Monthly

Safe containment description: Steel tanks with plastic-lined containment berms

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Haul to commercial facility

Waste type: DRILLING

Waste content description: Fresh water based drilling fluid

Amount of waste: 1500 barrels

Waste disposal frequency : Weekly

Safe containment description: Steel tanks with plastic-lined containment berms

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Haul to commercial facility

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Waste type: SEWAGE

Waste content description: Grey Water/Human Waste

Amount of waste: 5000 gallons

Waste disposal frequency : Weekly

Safe containment description: Approved waste storage tanks with containment

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Haul to commercial facility

Waste type: GARBAGE

Waste content description: General trash/garbage

Amount of waste: 5000 pounds

Waste disposal frequency : Weekly

Safe containment description: Enclosed trash trailer

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Haul to commercial facility

Reserve Pit

Reserve Pit being used? N

Temporary disposal of produced water into reserve pit? NO

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

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

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

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? Y

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Description of cuttings location Approximately 9771 cubic feet, stored in Steel tanks. Will be hauled to commercial facility per well.

Cuttings area length (ft.)

Cuttings area width (ft.)

Cuttings area depth (ft.)

Cuttings area volume (cu. yd.)

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

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

RAIDER_FEDERAL_COM_Location_Layout_20191016101452.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: RAIDER PAD

Multiple Well Pad Number: 302

Recontouring attachment:

RAIDER_FEDERAL_COM_Reclamation_plat_20191016101552.pdf

Drainage/Erosion control construction: Drainage and erosion will be constantly monitored to prevent compromising the well site integrity, and to protect the surrounding native topography.

Drainage/Erosion control reclamation: Upon reclamation, well site will be returned to its native contour. Water breaks will be added if needed, to prevent unnatural erosion and loss of vegetation.

Well pad proposed disturbance (acres): 4.434

Well pad interim reclamation (acres): 2.53

Well pad long term disturbance (acres): 1.904

Road proposed disturbance (acres): 1.187

Road interim reclamation (acres): 0

Road long term disturbance (acres): 1.187

Powerline proposed disturbance (acres): 0

Powerline interim reclamation (acres): 0

Powerline long term disturbance (acres): 0

Pipeline proposed disturbance (acres): 0

Pipeline interim reclamation (acres): 0

Pipeline long term disturbance (acres): 0

Other proposed disturbance (acres): 0

Other interim reclamation (acres): 0

Other long term disturbance (acres): 0

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Total proposed disturbance: 5.621 **Total interim reclamation:** 2.53 **Total long term disturbance:** 3.091

Disturbance Comments: Onsite done for this pad on 4/25/19 with Paul Murphy.

Reconstruction method: Come back in with heavy equipment, remove caliche in the reclamation area, and replace with native topsoil. Reconstruction of pad will occur once all wells on location have been drilled and completed.
Topsoil redistribution: Surface disturbance will be limited to well site surveyed dimensions. Topsoil will be stored along the west edge of the pad site.
Soil treatment: Native caliche will be used in the initial construction of the well pad. Pad will be compacted using fresh water, dust control measures will be implemented as needed.
Existing Vegetation at the well pad: Surface disturbance will be limited to well site surveyed dimensions. Topsoil will be stored along the East edge of the pad site.
Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Will be windrowed to the edge of the disturbance and be utilized as a barrier from water run-off.
Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: Surface disturbance will be limited.

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: N/A

Existing Vegetation Community at other disturbances attachment:

Non native seed used? N

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? N

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed Summary

Total pounds/Acre:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: **Last Name:**

Phone: **Email:**

Seedbed prep: Prepare a 3-5 inch deep seedbed, with the top 3-4 inches consisting of topsoil.

Seed BMP: Seeding will be done in the proper season, and monitored for the re-establishment of native vegetation.

Seed method: Broadcast

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: Spray for noxious weeds and bare ground as needed.

Weed treatment plan attachment:

Monitoring plan description: All disturbed areas will be closely monitored for any primary or secondary noxious weeds. Should any be found, chemical spraying in accordance with state regulations will be implemented.
Monitoring plan attachment:

Success standards: No primary or secondary noxious weed will be allowed. Vegetation will be returned to its native standard.
Pit closure description: No open pits will be constructed.

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Other Local Office:

USFS Region:

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

Disturbance type: WELL PAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

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

Disturbance type: PIPELINE

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

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

Disturbance type: OTHER

Describe: Power Line

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

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

Section 12 - Other Information

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

ROW Type(s):

ROW Applications

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

SUPO Additional Information: See attached SUPO.

Use a previously conducted onsite? Y

Previous Onsite information: Onsite conducted with Paul Murphy on 4/25/19

Other SUPO Attachment

RAIDER_FEDERAL_COM_Arch_Survey_20191016103249.pdf
Raider_302H__401H__402H_SUPO_20191016114455.pdf

AFMSS

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

PWD Data Report

06/10/2020

APD ID: 10400049567 **Submission Date:** 10/17/2019

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

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

Section 1 - General

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

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

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

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Lined pit Monitor description:

Lined pit Monitor attachment:

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

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

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

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

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

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

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

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

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

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? N

Produced Water Disposal (PWD) Location:

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

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

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

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

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? N

Produced Water Disposal (PWD) Location:

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

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

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

Other PWD discharge volume (bbl/day):

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

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

Bond Info Data Report

06/10/2020

APD ID: 10400049567 **Submission Date:** 10/17/2019

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: RAIDER FEDERAL **Well Number:** 401H

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

Highlighted data reflects the most recent changes

Show Final Text

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB001471

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

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
30-025-48390	96434	Red Hills-Bone Spring, North

[4] Property Code	[5] Property Name	[6] Well Number
322254	RAIDER FEDERAL	401H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372165	CENTENNIAL RESOURCE PRODUCTION, LLC	3530.2'

[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
A	21	24S	34E		433	NORTH	1302	EAST	LEA

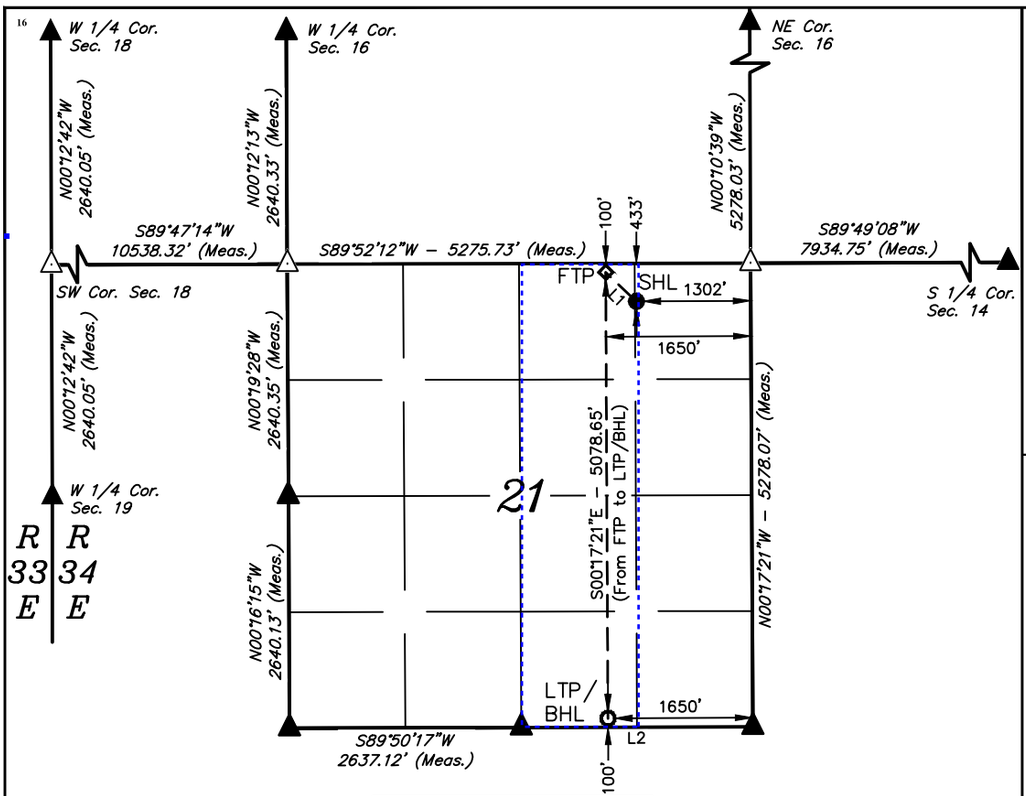
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	21	24S	34E		100	SOUTH	1650	EAST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
160			

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	N46°27'48"W	482.31'
L2	S89°50'59"W	2637.82'

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°12'32.79" (32.209109°)
LONGITUDE = 103°28'14.15" (103.470598°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 440878.89' X: 808170.73'
UTM, NAD 83 (ZONE 13)
Y: 11694989.05' X: 2113312.04'

NAD 83 (FIRST TAKE POINT)
LATITUDE = 32°12'36.09" (32.210026°)
LONGITUDE = 103°28'18.21" (103.471724°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 441209.60' X: 807819.75'
UTM, NAD 83 (ZONE 13)
Y: 11695317.53' X: 2112959.07'

NAD 83 (LTP/BHL)
LATITUDE = 32°11'45.85" (32.196069°)
LONGITUDE = 103°28'18.14" (103.471704°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 436131.97' X: 807866.63'
UTM, NAD 83 (ZONE 13)
Y: 11690240.98' X: 2113037.43'

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

2000' 1000' 0' 2000'
SCALE
DRAWN BY: J.N. 01-28-19

● = SURFACE HOLE LOCATION
◇ = FIRST TAKE POINT
○ = LAST TAKE POINT/ BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED
△ = SECTION CORNER RE-ESTABLISHED. (Not Set on Ground.)

[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.

10/16/19
Signature Date

Kanicia Schlichting
Printed Name

kanicia.schlichting@cdevinc.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.

January 24, 2019
Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number:

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
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Phone: (575) 748-1283 Fax: (575) 748-9720
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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
	96434	Red Hills-Bone Spring, North

[4] Property Code	[5] Property Name	[6] Well Number
	RAIDER FEDERAL	401H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372165	CENTENNIAL RESOURCE PRODUCTION, LLC	3530.2'

[10] Surface Location

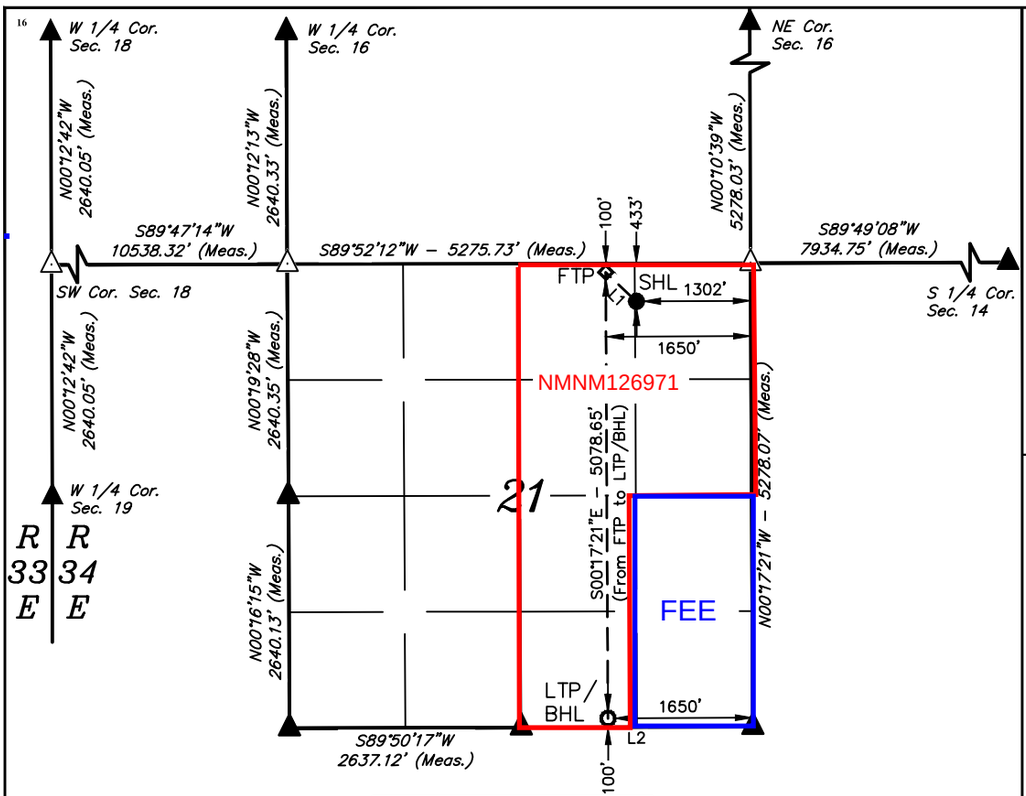
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	21	24S	34E		433	NORTH	1302	EAST	LEA

[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
O	21	24S	34E		100	SOUTH	1650	EAST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
160			

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.



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N46°27'48"W	482.31'
L2	S89°50'59"W	2637.82'

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°12'32.79" (32.209109°)
LONGITUDE = 103°28'14.15" (103.470598°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 440878.89' X: 808170.73'
UTM, NAD 83 (ZONE 13)
Y: 11694989.05' X: 2113312.04'

NAD 83 (FIRST TAKE POINT)
LATITUDE = 32°12'36.09" (32.210026°)
LONGITUDE = 103°28'18.21" (103.471724°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 441209.60' X: 807819.75'
UTM, NAD 83 (ZONE 13)
Y: 11695317.53' X: 2112959.07'

NAD 83 (LTP/BHL)
LATITUDE = 32°11'45.85" (32.196069°)
LONGITUDE = 103°28'18.14" (103.471704°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 436131.97' X: 807866.63'
UTM, NAD 83 (ZONE 13)
Y: 11690240.98' X: 2113037.43'

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

2000' 1000' 0' 2000'
SCALE
DRAWN BY: J.N. 01-28-19

● = SURFACE HOLE LOCATION
◇ = FIRST TAKE POINT
○ = LAST TAKE POINT/ BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED
△ = SECTION CORNER RE-ESTABLISHED. (Not Set on Ground.)

[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.

10/16/19
Signature Date

Kanicia Schlichting
Printed Name

kanicia.schlichting@cdevinc.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.

January 24, 2019
Date of Survey

Signature and Seal of Professional Surveyor:

PAUL BUCHELE NEW MEXICO 23782 PROFESSIONAL SURVEYOR 01-28-19

Certificate Number:

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
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

Date: 10/10/2019

☒ Original Operator & OGRID No.: Centennial Resource Production, LLC 372165
☐ Amended - 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, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

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
Raider Federal Com 302H	Pending	A-21-24S-34E	433 FNL & 1272 FEL	2400 MCF/D	Neither	New Well
Raider Federal 401H	Pending 30-025-48390	A-21-24S-34E	433 FNL & 1302 FEL	1350 MCF/D	Neither	New Well
Raider Federal Com 402H	Pending	A-21-24S-34E	433 FNL & 1242 FEL	1380 MCF/D	Neither	New Well

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated Lucid Energy Group low/high pressure gathering system located in Lea County, New Mexico. It will require 0' of pipeline to connect the facility to low/high pressure gathering system. Centennial Resource Production, LLC provides (periodically) to Lucid Energy Group a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Centennial Resource Production, LLC and Lucid Energy Group have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Red Hills Plant located in Sec. 13, Twn. 24S, Rng. 33E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Lucid Energy Group system at that time. Based on current information, it is Centennial Resource Production, LLC'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.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines

- NGL Removal – On lease
    - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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

Action 14481

CONDITIONS OF APPROVAL

Operator:			OGRID:	Action Number:	Action Type:
CENTENNIAL RESOURCE PRODUCTION	1001 17th Street, Suite 1800	Denver, CO80202	372165	14481	FORM 3160-3

OCD Reviewer	Condition
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
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