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. **[329976]**

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

9. API Well No. **30-025-49017**

3a. Address

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

10. Field and Pool, or Exploratory **[28432]**

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 04/12/2021

SL

KZ
06/14/2021

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 05/11/2021

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

Application Data Report
05/12/2021

APD ID: 10400054206 **Submission Date:** 02/11/2020

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400054206 **Tie to previous NOS?** N **Submission Date:** 02/11/2020

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: NMNM129267 **Lease Acres:**

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: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** 3rd BONE SPRING **Pool Name:** GRAMA RIDGE-BONE SPRING, WEST

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

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

Is the proposed well in an area containing other mineral resources? 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:** Crunch Berry 6 Federal Com **Number:** 602H

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: 27 Miles **Distance to nearest well:** 30 FT **Distance to lease line:** 300 FT

Reservoir well spacing assigned acres Measurement: 321 Acres

Well plat: Crunch_Berry_6_Fed_Com_702H_Lease_C102_20210426163752.pdf

Crunch_Berry_6_Fed_Com_702H_C102_20210426163753.pdf

Well work start Date: 11/01/2020 **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	300	FNL	1805	FWL	22S	34E	6	Lot 3	32.427181	-103.511687	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 129267	3633	0	0	Y
KOP Leg #1	100	FNL	1805	FWL	22S	34E	6	Lot 3	32.427731	-103.51688	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 129267	-7890	11526	11523	Y

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

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	1298	FWL	22S	34E	6	Lot 3	32.427727	-103.51333	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 129267	-8463	12426	12096	Y
EXIT Leg #1	100	FSL	1298	FWL	22S	34E	7	Aliquot SESW	32.399238	-103.513326	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 017440	-8463	22218	12096	Y
BHL Leg #1	100	FSL	1298	FWL	22S	34E	7	Aliquot SESW	32.399238	-103.513326	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 017440	-8463	22218	12096	Y

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

Drilling Plan Data Report
05/12/2021

APD ID: 10400054206 **Submission Date:** 02/11/2020

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

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
659182	RUSTLER	3632	1866	1866	SANDSTONE	NONE	N
1111272	SALADO	1439	2193	2193	SALT	USEABLE WATER	N
1111273	YATES	-42	3674	3674	ANHYDRITE	NONE	N
659183	CAPITAN REEF	-345	3977	3977	OTHER : Carbonate	USEABLE WATER	N
659184	CHERRY CANYON	-1981	5613	5613	SANDSTONE	NATURAL GAS, OIL	N
659185	BRUSHY CANYON	-3551	7183	7183	SANDSTONE	NATURAL GAS, OIL	N
659186	BONE SPRING LIME	-5290	8922	8922	OTHER, SANDSTONE : Carbonate	NATURAL GAS, OIL	N
659187	AVALON SAND	-5426	9058	9058	SHALE	CO2, NATURAL GAS, OIL	N
659188	BONE SPRING 1ST	-6447	10079	10079	SANDSTONE	NATURAL GAS, OIL	N
659189	BONE SPRING 2ND	-6622	10254	10254	OTHER, SANDSTONE : Carbonate	NATURAL GAS, OIL	N
659190	BONE SPRING 3RD	-7511	11143	11143	SANDSTONE	NATURAL GAS, OIL	Y
659191	WOLFCAMP	-8508	12140	12140	OTHER, SHALE : Carbonate	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 12096

Equipment: The BOP and related equipment will meet or exceed the requirements of a 10M/5M-psi system as set forth in On Shore Order No. 2. See attached BOP Schematic. A. Casinghead: 13 5/8 10,000 psi SOW x 13 10,000 psi WP Intermediate Spool: 13 10,000 psi WP x 11 10,000 psi WP Tubinghead: 11 10,000 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

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

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.
Requesting Variance? YES

Variance request: Centennial Resource Production, LLC hereby requests to use a flex hose on the choke maifold for this well. Please see attached multi-bowl procedure.For use of 5K annular, well control plan is attached.
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 10,000 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 100% of its working pressure. 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 10,000 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:

10M_Choke_Manifold_20210426165642.pdf

BOP Diagram Attachment:

BOP_Schematic_CoFlex_Choke_5K_20210426165658.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	3633	3513	120	H-40	94	OTHER - WELD						
2	SURFACE	17.5	13.375	NEW	API	N	0	1900	0	1900	3633	1733	1900	J-55	54.5	OTHER - BTC	1.21	16.55	DRY	8.24	DRY	8.24
3	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5200	0	5196	3386	-1563	5200	J-55	40	LT&C	1.35	5.48	DRY	2.5	BUOY	3.03
4	PRODUCTION	8.75	5.5	NEW	API	N	0	12330	0	12096	3386	-8463	12330	OTHER	20	OTHER - TCBC-HT	1.85	7.53	DRY	2.31	DRY	2.6

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

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
5	PRODUCTION	8.5	5.5	NEW	API	N	12330	22218	12096	12096	-8463	-8463	9888	OTHER	20	OTHER - TCBC-HT	1.85	7.53	DRY	2.31	DRY	2.6

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20181217132208.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20190618111636.pdf

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20181217132216.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20181217132222.pdf

Technical_Data_Sheet_HIS_TCBC_HT_5_20210426171230.5_20

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20181217132228.pdf

Technical_Data_Sheet_HIS_TCBC_HT_5.5_20P110RY_20200921095139.pdf

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

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	0
CONDUCTOR	Lead		0	120	121	1.49	12.9	181		Grout	Bentonite 4% BWOC, Cellophane #/sx, CaCl2 2% BWOC.
SURFACE	Lead		0	1400	1118	1.74	13.5	1945	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		1400	1900	518	1.34	14.8	695	100	Class C Premium	C-45 Econolite 0.10%, CaCl 1.0%
INTERMEDIATE	Lead		0	4700	1138	3.44	10.7	3915	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		4700	5200	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	11527	1126	3.41	10.6	3840	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		11527	22219	2488	1.24	14.2	3085	25	50:25:25 Class H: Poz: CPO18	Citric acid 0.03%, CSA-1000 0.05%, C47B 0.25%, C-503P 0.30%

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

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

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
5200	22218	OTHER : OBM	8.8	11							
0	1900	OTHER : FW	8.6	9.5							
1900	5200	OTHER : Brine	9	10							

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:

DIRECTIONAL SURVEY,GAMMA RAY LOG,

Coring operation description for the well:

n/a

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 6918 **Anticipated Surface Pressure:** 4256

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_Crunch_Berry_6_Fed_Com_702H_20200211151233.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Crunch_Berry_6_Fed_Com_702H_Wellplan_20210426172351.pdf

Other proposed operations facets description:

Centennial Resource Development New Mexico Multi-Well Pad Drilling
Bone Springs Formations
o 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 Spudder 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.
o Intermediate and Production Casing For all subsequent Intermediate and Production Casing Strings, the well will be drilled below 13-3/8 to its intended final TD. 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.

Gas Capture Plan attached. Please see attached geoprog and Potash contingency plan.
Geology:
In the Basin and in the reef where we drill there is no Tansil or Yates. These formations are on the shelf. We are not drilling on the shelf as far as I can tell.

Other proposed operations facets attachment:

CRD_Batch_Setting_Procedures_20200210130422.pdf
Crunch_Berry_6_Federal_Com_602H_603H_702H_GCP_20200210130408.docx
CrunchBerry_6_Fed_Com_702H_Potash_Contingency_20200914174505.pdf
Crunch_Berry_6_Fed_Com_702H_WBD__Proposed__20210426172231.pdf
CDEV_Multi_Bowl_Procedure_Crunch_Berry_6_Fed_Com_702H_20210426172231.pdf
Crunch_Berry_6_Federal_Com_702H_Pre_Drill_Prog_File_20210426172246.pdf

Other Variance attachment:

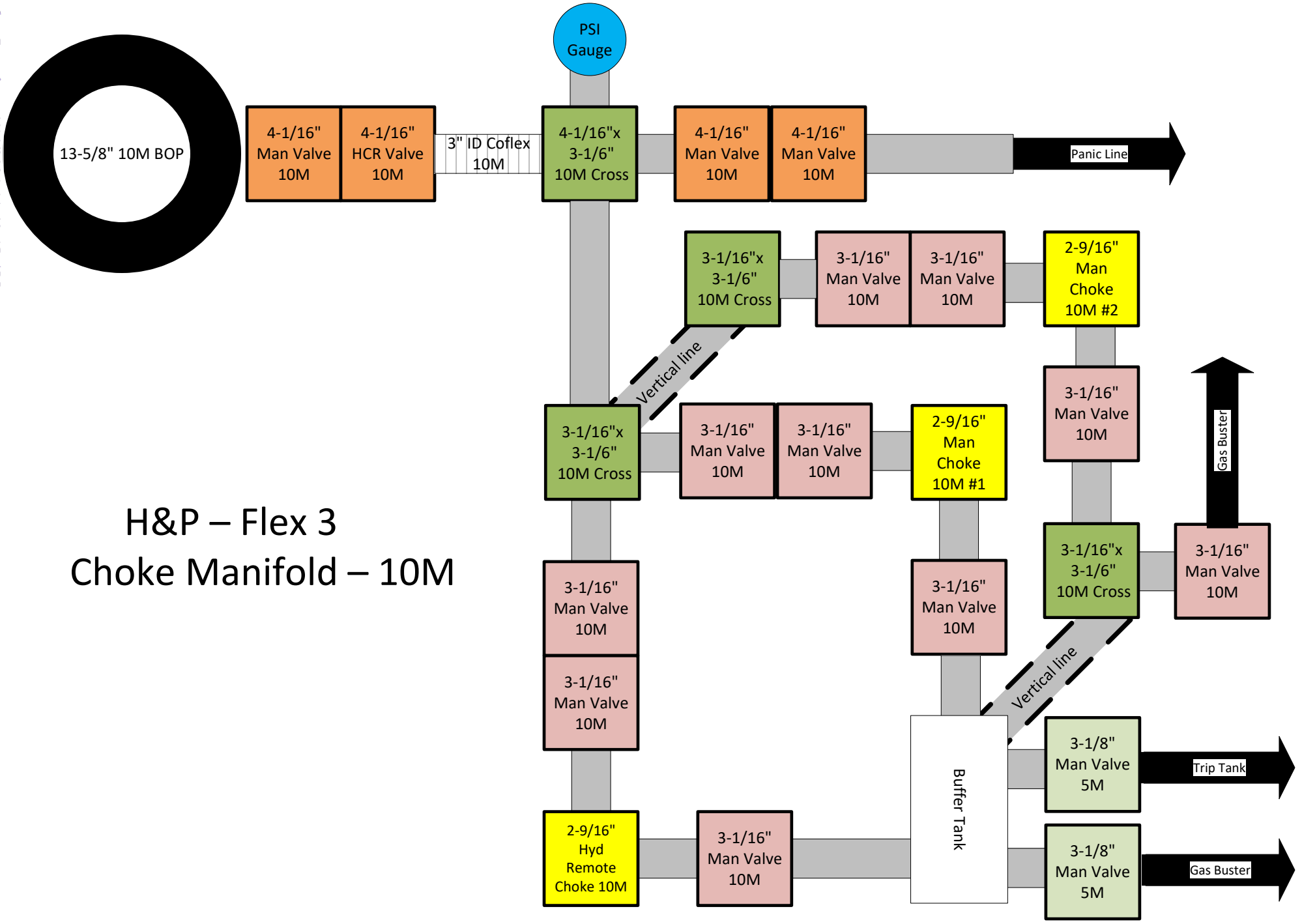
CDEV_Well_Control_Plan_Bonesprings_20210426172139.pdf
Crunch_Berry_6_Fed_Com_702H_Wellplan_20210426172139.pdf
H_P_Flex_Hose_Specs_Continental_Hose_SN_67255_20210426172139.pdf

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

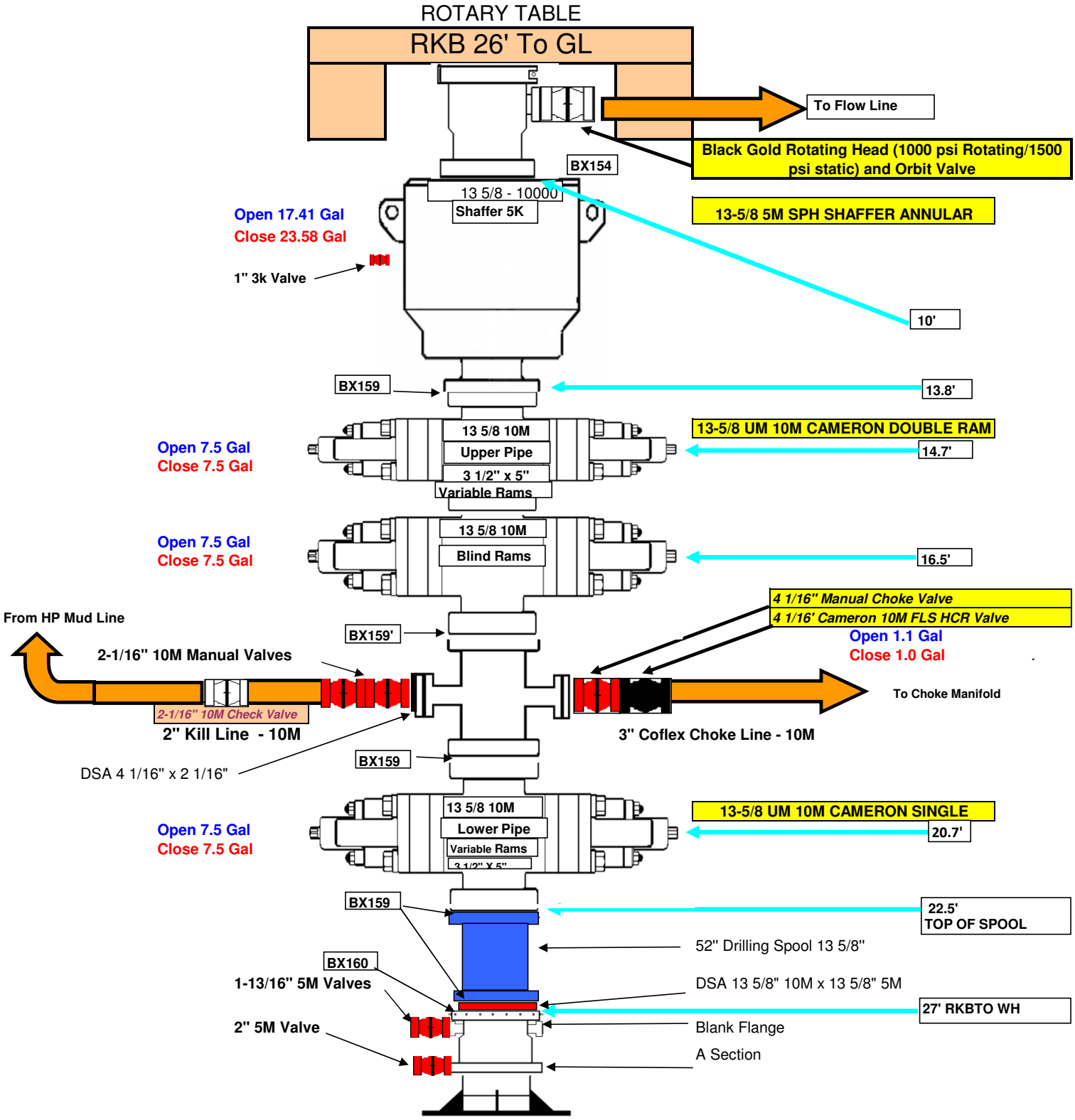
Well Name: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

CDEV_Multi_Bowl_Procedure_Crunch_Berry_6_Fed_Com_702H_20210426172139.pdf

H&P – Flex 3
Choke Manifold – 10M



H&P Rig


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
16.5'
Open 7.5 Gal
Close 7.5 Gal
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
2-1/16" 10M Check Valve
2" Kill Line - 10M
To Choke Manifold
3" Coflex Choke Line - 10M
DSA 4 1/16" x 2 1/16"
BX159
13 5/8 10M
Lower Pipe
Variable Rams
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

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)
- 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)
- 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)
- 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)
- 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.

HOUSTON INTERNATIONAL SPECIALTY, INC
PREMIUM CONNECTIONS

Size	5.5
Grade	P110 RY
Weight	20

TCBC-HT

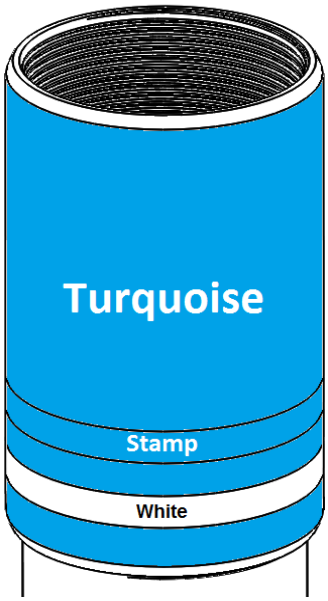
SeAH Steel

	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				

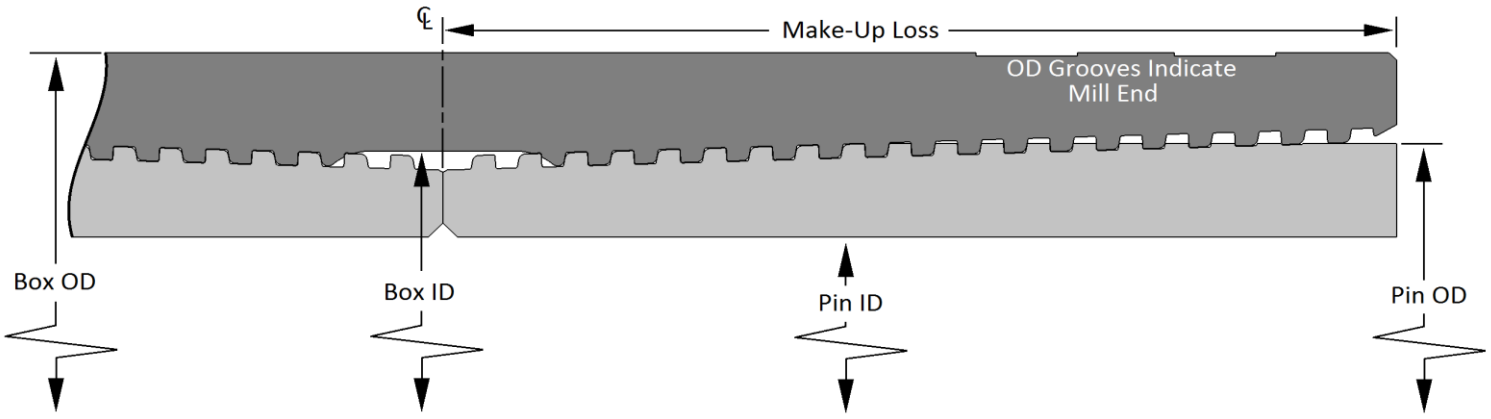
Torque Values (ft-lbs)				
Field End Make-Up			Max. Working Torque [1.]	Yield Torque
Minimum	Optimum [2.]	Maximum		
10,000	13,500	18,500	22,250	25,200

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.



*Data are for information purposes only. Though HIS has made efforts to ensure accuracy, HIS makes no warranty for loss or damage due to its use.

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

CENTENNIAL
RESOURCE DEVELOPMENT, INC

HYDROGEN SULFIDE CONTINGENCY PLAN

Crunch Berry 6 Federal Com 702H

Section 6

T 22S R 34E

Lea County, NM

Initial Date: 3/4/18

Revision Date:

Table of Contents

INTRODUCTION

This plan specifies precautionary measures, safety equipment, emergency procedures, responsibilities, duties, and the compliance status pertaining to the production operations of Hydrogen Sulfide producing wells on:

Centennial Resource Development, Inc.

This plan will be in full effect prior to and continuing with all drilling operations for all wells producing potential Hydrogen Sulfide on the

Crunch Berry Federal Com 702H

This plan was developed in response to the potential hazards involved when producing formations that may contain Hydrogen Sulfide (H_2S) It has been written in compliance with current New Mexico Oil Conservation Division Rule 118 and Bureau of Land Management 43 CFR 3160 Onshore Order No. 6.

All personnel shall receive proper H2S training in accordance with Onshore Order III.C.3.a

This plan shall require the full cooperation and efforts of all individuals participating in the production of potential H_2S wells.

Each individual is required to know their assigned responsibilities and duties in regard to normal production operations and emergency procedures.

Each person should thoroughly understand and be able to use all safety related equipment on the production facility.

Each person should become familiar with the location of all safety equipment and become involved in ensuring that all equipment is properly stored, easily accessible, and routinely maintained.

An ongoing training program will remain in effect with regular training, equipment inspections, and annual certifications for all personnel.

Centennial Resource Development, Inc. shall make every reasonable effort to provide all possible safeguards to protect all personnel, both on this location and in the immediate vicinity, from the harmful effects of H_2S exposure, if a release to the atmosphere should occur.

DIRECTIONS TO LOCATION

Crunch Berry Federal Com 702H

Section 6

T 22S R 34E

Lea County, NM

BEGINNING AT THE JUNCTION OF MAIN ST. & NM-176 IN EUNICE, NEW MEXICO, PROCEED IN A WESTERLY, THEN NORTHWESTERLY, THEN WESTERLY THEN NORTHWESTERLY DIRECTION ALONG NM-176 APPROXIMATELY 20.1 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHWEST; TURN LEFT AND PROCEED IN A SOUTHWESTERLY, THEN SOUTHERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 3.8 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHWEST; TURN RIGHT AND PROCEED IN A SOUTHWESTERLY DIRECTION APPROXIMATELY 0.1 MILES TO THE JUNCTION
OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHWEST; TURN LEFT AND PROCEED IN A SOUTHWESTERLY, THEN SOUTHERLY THEN WESTERLY
DIRECTION APPROXIMATELY 2.7 MILES TO THE BEGINNING OF THE PROPOSED ACCESS ROAD "A" TO THE WEST; FOLLOW ROAD FLAGS IN A WESTERLY, THEN SOUTHERLY DIRECTION APPROXIMATELY 2,068' TO THE PROPOSED LOCATION.
TOTAL DISTANCE FROM EUNICE, NEW MEXICO TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 27.1 MILES.

SAFE BRIEFING AREAS

Two areas will be designated as “SAFE BRIEFING AREAS”.

The Primary Safe Briefing Area

If the Primary Safe Briefing Area cannot be used due to wind conditions; the designated secondary safe briefing area will be used.

These two areas are so designated for accessibility reasons related to self-contained safe breathing air device locations, evacuation muster point utility, and for ease of overall communication, organizational support, as well as the all-important prevailing wind directions. Drawings of the facility denoting these locations are included on Page 15.

If H_2S is detected in concentrations equal to or in excess of 15 PPM, all personnel not assigned emergency duties are to assemble in the appropriate “SAFE BRIEFING AREA” for instructions.

Wind Direction Indicators: A windsock, shall be positioned, allowing the wind direction to be observed from anywhere on the charted facility location.

Warning-DANGER SIGNS for Approaching Traffic: All signs shall also be illuminated under conditions of poor visibility.

DANGER
POISONOUS GAS
HYDROGEN SULFIDE
DO NOT APPROACH IF AMBER LIGHTS ARE FLASHING

An amber strobe light system will be activated for H_2S concentrations of 10 PPM or greater and an audible alarm will sound when H_2S exceeds 15 ppm, and. This condition will exist until the all clear is given.

DRILL SITE LOCATION:

1. The drilling rig should be situated on location such that the prevailing winds blow across the rig toward the reserve pit or at right angles to a line from the rig to the reserve pit.
2. The entrance to the location should be designated so that it can be barricaded if Hydrogen Sulfide emergency conditions arise. An auxiliary exit (or entrance) should be available in case of a catastrophe; a shift in wind direction would not preclude escape from the location. Appropriate warning signs and flags should be placed at all location entrances.
3. Once H2S safety procedures are established on location, no beards or facial hair, which will interfere with face seal or mask, will be allowed on location.
4. A minimum of two BRIEFING AREAS will be established, no less than 250 feet from the wellhead and in such location that at least one area will be up-wind from the well at all times. Upon recognition of an emergency situation, all personnel should assemble at the designated briefing areas for instructions.
5. A safety equipment trailer will be station at one of the briefing areas.
6. Windsocks will be installed and wind streamers (6 to 8 feet above ground level) placed at the location entrance. Windsocks shall be illuminated for nighttime operations. Personnel should develop wind direction consciousness.
7. The mud-logging trailer will be located so as to minimize the danger from the gas that breaks out of the drilling fluid.
8. Shale shaker mud tanks will be located so as to minimize the danger from gas that breaks out of the drilling fluid.
9. Electric power plant(s) will be located as far from the well bore as practical so that it may be used under conditions where it otherwise would have to be shut down.
10. When approaching depth where Hydrogen Sulfide may be encountered, appropriate warning signs will be posted on all access roads to the location and at the foot of all stairways to the derrick floor.
11. Appropriate smoking areas will be designated, and smoking will be prohibited elsewhere.

The table below lists various poisonous gases and the concentrations at which they become dangerous.

TOXICITY OF VARIOUS GASES

TOXICITY OF GASES (Taken from API RP-49 September 1974 – Re-issued August 1978)					
Common Name	**Chemical Formula**	**Gravity (Air = 1)**	**Threshold 1 Limit**	**Hazardous 2 Limit**	**Lethal 3 Limit**
Hydrogen Sulfide	H_2S	1.18	10 ppm	250 ppm/1hr	600 ppm
Sulfur Dioxide	SO_2	2.21	20 ppm	---	1000 ppm
Carbon Monoxide	CO	0.97	50 ppm	400 ppm/1hr	1000 ppm
Carbon Dioxide	CO_2	1.52	5000 ppm	5%	10%
Methane	CH_4	0.55	90000 ppm	Combustible Above 5% in Air	

1. Threshold concentration at which it is believed that all workers may repeatedly be exposed day after day, without adverse effect	2. Hazardous concentration that may cause death	3. Lethal concentration that will cause death with short-term exposure

Properties of Gases

The produced gas will probably be a mixture of Carbon Dioxide, Hydrogen Sulfide, and Methane.

Carbon Dioxide
Carbon Dioxide (CO_2) is usually considered inert and is commonly used to extinguish fires.

It is heavier than air (1.52 times) and it will concentrate in low areas of still air.

Humans cannot breathe air containing more than 10% CO_2 without losing consciousness. Air containing 5% CO_2 will cause disorientation in a few minutes.

Continued exposures to CO_2 after being affected will cause convulsions, coma, and respiratory failure.

The threshold limit of CO_2 is 5000 ppm.

Short-term exposure to 50,000 PPM (5%) is reasonable. This gas is colorless and odorless and can be tolerated in relatively high concentrations.

Hydrogen Sulfide

Hydrogen Sulfide (H_2S) itself is a colorless, transparent gas and is flammable. It is heavier than air and, hence, may accumulate in low places.

Although the slightest presence of H_2S in the air is normally detectable by its characteristic "rotten egg" odor, it is dangerous to rely on the odor as a means of detecting excessive concentrations because the sense of smell is rapidly lost, allowing lethal concentrations to be accumulated without warning. The following table indicates the poisonous nature of Hydrogen Sulfide.

HYDROGEN SULFIDE TOXICITY			
Concentration			Effects
$\%H_2S$	PPM	GR/100 SCF 1	
0.001	10	0.65	Safe for 8 hours without respirator. Obvious and unpleasant odor.
0.002	20	1.30	Burning in eyes and irritation of respiratory tract after on hour.
0.01	100	6.48	Kills smell in 3 to 15 minutes; may sting eyes and throat.
0.02	200	12.96	Kills smell shortly; stings eyes and throat.
0.05	500	32.96	Dizziness; breathing ceases in a few minutes; need prompt artificial respiration.
0.07	700	45.92	Unconscious quickly; death will result if not rescued promptly
0.10	1000	64.80	DEATH!
Note: 1 grain per 100 cubic feet			

Sulfur Dioxide

Sulfur Dioxide is a colorless, transparent gas and is non-flammable.

Sulfur Dioxide (SO_2) is produced during the burning of H_2S. Although SO_2 is heavier than air, it will be picked up by a breeze and carried downwind at elevated temperatures. Since Sulfur Dioxide is extremely irritating to the eyes and mucous membranes of the upper respiratory tract, it has exceptionally good warning powers in this respect. The following table indicates the toxic nature of the gas.

SULFUR DIOXIDE TOXICITY		
Concentration		Effects
$\%SO_2$	PPM	
0.0005	3 to 5	Pungent odor-normally a person can detect SO_2 in this range.
0.0012	12	Throat irritation, coughing, and constriction of the chest tearing and smarting of eyes.
0.15	150	So irritating that it can only be endured for a few minutes.
0.05	500	Causes a sense of suffocation, even with first breath.

H_2S REQUIRED EQUIPMENT LIST

RESPIRATORY SAFETY SYSTEMS

- Working cascade system available on rig floor and pit system & 750' of air line hose
- Four (4) breathing air manifolds
- Four (4) 30-minute rescue packs
- Five (5) work/Escape units
- Five (5) escape units
- One (1) filler hose for the work/escape/rescue units

DETECTION AND ALARM SYSTEM

- 4 channel H2S monitor
- 4 wireless H2S monitors
- H2S alarm system (Audible/Red strobe)
- Personal gas monitor for each person on location
- Gas sample tubes

WELL CONTROL EQUIPMENT

- Flare line with remote ignitor and backup flare gun, placed 150' from wellhead
- Choke manifold with remotely operated choke
- Mud gas separator

VISUAL WARNING SYSTEMS

- One color code condition sign will be placed at each entrance reflecting possible conditions at the site
- A colored condition flag will be on display, reflecting current condition at the site at the time
- At least 4 wind socks placed on location, visible at all angles and locations

MUD PROGRAM

- Mud will contain sufficient weight and additives to control and minimize H2S

METALLURGY

- All drill strings, casing, tubing, wellhead, BOP, spools, kill lines, choke manifold and lines, and valves shall be suitable for anticipated H2S volume and pressure

COMMUNICATION

- Cell phones, intercoms, and satellite phones will be available on location

ADDITIONAL SAFETY RELATED ITEMS

- Stretcher
- 2 OSHA full body harness
- 20# class ABC fire extinguisher

DETERMINATION OF RADIUS OF EXPOSURE

Potentially hazardous volume means a volume of gas of such H2S concentration and flow rate that it may result in radius of exposure-calculated ambient concentrations of 100 ppm H2S at any occupied residence, school, church, park, school bus stop, place of business or other area where the public could reasonably be expected to frequent, or 500 ppm H2S at any Federal, State, County or municipal road or highway.

Currently there are no residence located within the ROE

Radius of exposure means the calculation resulting from using the Pasquill -Gifford derived equation, or by such other method(s) that may be approved by the authorized officer.
Advanced Fire and Safety has provided the Pasquill-Gifford formula in excel format for simple calculations.

NEW MEXICO OIL & GAS CONSERVATION DIVISION 118

Crunch Berry Federal Com 702H

H2S Concentration- 50 PPM

Maximum Escape Volume- 5000 MCF/Day

100 PPM Radius of Exposure - 42
(Formula= 1.589 x (50/1000000) x (5000 x 1000) x .6258

500 PPM Radius of Exposure (Block 16)- 19
Formula= .4546 x (50/1000000) x (5000 x 1000) x .6258

EMERGENCY CONTACT LIST

911 is available in the area			
NAME	**POSITION**	**COMPANY**	**NUMBER**
Centennial Contacts			
Ronny Hise	Drilling Engineer	CDEV	432-770-4786
Jason Fitzgerald	Superintendent	CDEV	318-347-3916
Mike Brown/Zach Gavin	Field Superintendent	CDEV	432-287-3003
Brett Thompson	Drilling Manager	CDEV	720-656-7027
Reggie Phillips	HSE Manager	CDEV	432-638-3380
H&P 650 Drilling Office	Drilling Supervisor	CDEV	432-538-3343
Local Emergency Response			
Fire Department			575-395-2511
Jal Community Hospital			505-395-2511
State Police			505-827-9000
Lea County Sheriff			575-396-3611
Safety Contractor			
Advanced Safety	Office	Advanced Safety	833-296-3913
Joe Gadway	Permian Supervisor	Advanced Safety	318-446-3716
Clint Hudson	Operations Manager	Advanced Safety	337-552-8330
Well Control Company			
Wild Well Control			866-404-9564
Contractors			
Tommy E Lee	Pump Trucks		432-813-7140
Paul Smith	Drilling Fluids	Momentum	307-258-6254
Compass Coordinators	Cement	Compass	432-561-5970

NEW MEXICO

LEA
CRUNCH BERRY
CRUNCH BERRY 6 FEDERAL COM 702H

CRUNCH BERRY 6 FEDERAL COM 702H

Plan: PWP0

Standard Planning Report - Geographic

11 April, 2021

Centennial Resource Dev

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well CRUNCH BERRY 6 FEDERAL COM 702H
Company:	NEW MEXICO	**TVD Reference:**	RKB=3632.5+25 @ 3657.5usft
Project:	LEA	**MD Reference:**	RKB=3632.5+25 @ 3657.5usft
Site:	CRUNCH BERRY	**North Reference:**	True
Well:	CRUNCH BERRY 6 FEDERAL COM 702H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CRUNCH BERRY 6 FEDERAL COM 702H		
Design:	PWP0		

Project LEA

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

Site CRUNCH BERRY

Site Position:		**Northing:**	0.00 usft	**Latitude:**	0° 0' 0.000 N
From:	Map	**Easting:**	0.00 usft	**Longitude:**	109° 29' 19.478 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.00 °

Well CRUNCH BERRY 6 FEDERAL COM 702H

Well Position	**+N/-S**	0.0 usft	**Northing:**	11,774,129.28 usft	**Latitude:**	32° 25' 37.852 N
	+E/-W	0.0 usft	**Easting:**	2,099,504.12 usft	**Longitude:**	103° 30' 42.075 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,632.5 usft

Wellbore CRUNCH BERRY 6 FEDERAL COM 702H

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	7.74	60.44	48,920.67874525

Design PWP0

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	180.00

Plan Survey Tool Program **Date** 4/11/2021

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	22,218.7	PWP0 (CRUNCH BERRY 6 FED	MWD+IFR1+MS OWSG_Rev2_ MWD + IFR1 +	

Centennial Resource Dev

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well CRUNCH BERRY 6 FEDERAL COM 702H
Company:	NEW MEXICO	**TVD Reference:**	RKB=3632.5+25 @ 3657.5usft
Project:	LEA	**MD Reference:**	RKB=3632.5+25 @ 3657.5usft
Site:	CRUNCH BERRY	**North Reference:**	True
Well:	CRUNCH BERRY 6 FEDERAL COM 702H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CRUNCH BERRY 6 FEDERAL COM 702H		
Design:	PWP0		

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	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,200.0	2.00	0.00	3,200.0	3.5	0.0	1.00	1.00	0.00	0.00	
8,743.0	2.00	0.00	8,739.6	196.9	0.0	0.00	0.00	0.00	0.00	
8,943.0	0.00	0.00	8,939.5	200.4	0.0	1.00	-1.00	0.00	180.00	
11,526.5	0.00	0.00	11,523.0	200.4	0.0	0.00	0.00	0.00	0.00	
12,426.5	90.00	180.70	12,096.0	-372.5	-7.0	10.00	10.00	0.00	180.70	
15,680.4	90.00	179.81	12,096.0	-3,626.3	-21.4	0.03	0.00	-0.03	-90.00	
22,218.8	90.00	179.81	12,096.0	-10,164.7	0.8	0.00	0.00	0.00	0.00	

Centennial Resource Dev

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well CRUNCH BERRY 6 FEDERAL COM 702H
Company:	NEW MEXICO	**TVD Reference:**	RKB=3632.5+25 @ 3657.5usft
Project:	LEA	**MD Reference:**	RKB=3632.5+25 @ 3657.5usft
Site:	CRUNCH BERRY	**North Reference:**	True
Well:	CRUNCH BERRY 6 FEDERAL COM 702H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CRUNCH BERRY 6 FEDERAL COM 702H		
Design:	PWP0		

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	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
100.0	0.00	0.00	100.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
200.0	0.00	0.00	200.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
300.0	0.00	0.00	300.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
400.0	0.00	0.00	400.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
500.0	0.00	0.00	500.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
600.0	0.00	0.00	600.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
700.0	0.00	0.00	700.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
800.0	0.00	0.00	800.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
900.0	0.00	0.00	900.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,100.0	0.00	0.00	1,100.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,200.0	0.00	0.00	1,200.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,300.0	0.00	0.00	1,300.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,500.0	0.00	0.00	1,500.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,600.0	0.00	0.00	1,600.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,700.0	0.00	0.00	1,700.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,800.0	0.00	0.00	1,800.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,900.0	0.00	0.00	1,900.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,000.0	0.00	0.00	2,000.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,100.0	0.00	0.00	2,100.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,200.0	0.00	0.00	2,200.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,300.0	0.00	0.00	2,300.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,400.0	0.00	0.00	2,400.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,500.0	0.00	0.00	2,500.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,600.0	0.00	0.00	2,600.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,700.0	0.00	0.00	2,700.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,800.0	0.00	0.00	2,800.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,900.0	0.00	0.00	2,900.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
3,000.0	0.00	0.00	3,000.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
3,100.0	1.00	0.00	3,100.0	0.9	0.0	11,774,130.16	2,099,504.10	32° 25' 37.861 N	103° 30' 42.075 W
3,200.0	2.00	0.00	3,200.0	3.5	0.0	11,774,132.77	2,099,504.07	32° 25' 37.887 N	103° 30' 42.075 W
3,300.0	2.00	0.00	3,299.9	7.0	0.0	11,774,136.26	2,099,504.02	32° 25' 37.921 N	103° 30' 42.075 W
3,400.0	2.00	0.00	3,399.8	10.5	0.0	11,774,139.75	2,099,503.97	32° 25' 37.956 N	103° 30' 42.075 W
3,500.0	2.00	0.00	3,499.8	14.0	0.0	11,774,143.24	2,099,503.92	32° 25' 37.990 N	103° 30' 42.075 W
3,600.0	2.00	0.00	3,599.7	17.4	0.0	11,774,146.73	2,099,503.87	32° 25' 38.025 N	103° 30' 42.075 W
3,700.0	2.00	0.00	3,699.6	20.9	0.0	11,774,150.22	2,099,503.83	32° 25' 38.059 N	103° 30' 42.075 W
3,800.0	2.00	0.00	3,799.6	24.4	0.0	11,774,153.71	2,099,503.78	32° 25' 38.094 N	103° 30' 42.075 W
3,900.0	2.00	0.00	3,899.5	27.9	0.0	11,774,157.20	2,099,503.73	32° 25' 38.129 N	103° 30' 42.075 W
4,000.0	2.00	0.00	3,999.5	31.4	0.0	11,774,160.69	2,099,503.68	32° 25' 38.163 N	103° 30' 42.075 W
4,100.0	2.00	0.00	4,099.4	34.9	0.0	11,774,164.18	2,099,503.63	32° 25' 38.198 N	103° 30' 42.075 W
4,200.0	2.00	0.00	4,199.3	38.4	0.0	11,774,167.67	2,099,503.58	32° 25' 38.232 N	103° 30' 42.075 W
4,300.0	2.00	0.00	4,299.3	41.9	0.0	11,774,171.16	2,099,503.53	32° 25' 38.267 N	103° 30' 42.075 W
4,400.0	2.00	0.00	4,399.2	45.4	0.0	11,774,174.65	2,099,503.48	32° 25' 38.301 N	103° 30' 42.075 W
4,500.0	2.00	0.00	4,499.2	48.9	0.0	11,774,178.14	2,099,503.44	32° 25' 38.336 N	103° 30' 42.075 W
4,600.0	2.00	0.00	4,599.1	52.3	0.0	11,774,181.63	2,099,503.39	32° 25' 38.370 N	103° 30' 42.075 W
4,700.0	2.00	0.00	4,699.0	55.8	0.0	11,774,185.12	2,099,503.34	32° 25' 38.405 N	103° 30' 42.075 W
4,800.0	2.00	0.00	4,799.0	59.3	0.0	11,774,188.61	2,099,503.29	32° 25' 38.439 N	103° 30' 42.075 W
4,900.0	2.00	0.00	4,898.9	62.8	0.0	11,774,192.10	2,099,503.24	32° 25' 38.474 N	103° 30' 42.075 W
5,000.0	2.00	0.00	4,998.9	66.3	0.0	11,774,195.59	2,099,503.19	32° 25' 38.508 N	103° 30' 42.075 W
5,100.0	2.00	0.00	5,098.8	69.8	0.0	11,774,199.08	2,099,503.14	32° 25' 38.543 N	103° 30' 42.075 W
5,200.0	2.00	0.00	5,198.7	73.3	0.0	11,774,202.56	2,099,503.10	32° 25' 38.578 N	103° 30' 42.075 W
5,300.0	2.00	0.00	5,298.7	76.8	0.0	11,774,206.05	2,099,503.05	32° 25' 38.612 N	103° 30' 42.075 W

Centennial Resource Dev

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well CRUNCH BERRY 6 FEDERAL COM 702H
Company:	NEW MEXICO	**TVD Reference:**	RKB=3632.5+25 @ 3657.5usft
Project:	LEA	**MD Reference:**	RKB=3632.5+25 @ 3657.5usft
Site:	CRUNCH BERRY	**North Reference:**	True
Well:	CRUNCH BERRY 6 FEDERAL COM 702H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CRUNCH BERRY 6 FEDERAL COM 702H		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,400.0	2.00	0.00	5,398.6	80.3	0.0	11,774,209.54	2,099,503.00	32° 25' 38.647 N	103° 30' 42.075 W
5,500.0	2.00	0.00	5,498.5	83.8	0.0	11,774,213.03	2,099,502.95	32° 25' 38.681 N	103° 30' 42.075 W
5,600.0	2.00	0.00	5,598.5	87.2	0.0	11,774,216.52	2,099,502.90	32° 25' 38.716 N	103° 30' 42.075 W
5,700.0	2.00	0.00	5,698.4	90.7	0.0	11,774,220.01	2,099,502.85	32° 25' 38.750 N	103° 30' 42.075 W
5,800.0	2.00	0.00	5,798.4	94.2	0.0	11,774,223.50	2,099,502.80	32° 25' 38.785 N	103° 30' 42.075 W
5,900.0	2.00	0.00	5,898.3	97.7	0.0	11,774,226.99	2,099,502.76	32° 25' 38.819 N	103° 30' 42.075 W
6,000.0	2.00	0.00	5,998.2	101.2	0.0	11,774,230.48	2,099,502.71	32° 25' 38.854 N	103° 30' 42.075 W
6,100.0	2.00	0.00	6,098.2	104.7	0.0	11,774,233.97	2,099,502.66	32° 25' 38.888 N	103° 30' 42.075 W
6,200.0	2.00	0.00	6,198.1	108.2	0.0	11,774,237.46	2,099,502.61	32° 25' 38.923 N	103° 30' 42.075 W
6,300.0	2.00	0.00	6,298.1	111.7	0.0	11,774,240.95	2,099,502.56	32° 25' 38.957 N	103° 30' 42.075 W
6,400.0	2.00	0.00	6,398.0	115.2	0.0	11,774,244.44	2,099,502.51	32° 25' 38.992 N	103° 30' 42.075 W
6,500.0	2.00	0.00	6,497.9	118.7	0.0	11,774,247.93	2,099,502.46	32° 25' 39.027 N	103° 30' 42.075 W
6,600.0	2.00	0.00	6,597.9	122.1	0.0	11,774,251.42	2,099,502.42	32° 25' 39.061 N	103° 30' 42.075 W
6,700.0	2.00	0.00	6,697.8	125.6	0.0	11,774,254.91	2,099,502.37	32° 25' 39.096 N	103° 30' 42.075 W
6,800.0	2.00	0.00	6,797.8	129.1	0.0	11,774,258.40	2,099,502.32	32° 25' 39.130 N	103° 30' 42.075 W
6,900.0	2.00	0.00	6,897.7	132.6	0.0	11,774,261.89	2,099,502.27	32° 25' 39.165 N	103° 30' 42.075 W
7,000.0	2.00	0.00	6,997.6	136.1	0.0	11,774,265.38	2,099,502.22	32° 25' 39.199 N	103° 30' 42.075 W
7,100.0	2.00	0.00	7,097.6	139.6	0.0	11,774,268.87	2,099,502.17	32° 25' 39.234 N	103° 30' 42.075 W
7,200.0	2.00	0.00	7,197.5	143.1	0.0	11,774,272.36	2,099,502.12	32° 25' 39.268 N	103° 30' 42.075 W
7,300.0	2.00	0.00	7,297.4	146.6	0.0	11,774,275.85	2,099,502.07	32° 25' 39.303 N	103° 30' 42.075 W
7,400.0	2.00	0.00	7,397.4	150.1	0.0	11,774,279.34	2,099,502.03	32° 25' 39.337 N	103° 30' 42.075 W
7,500.0	2.00	0.00	7,497.3	153.6	0.0	11,774,282.83	2,099,501.98	32° 25' 39.372 N	103° 30' 42.075 W
7,600.0	2.00	0.00	7,597.3	157.0	0.0	11,774,286.32	2,099,501.93	32° 25' 39.406 N	103° 30' 42.075 W
7,700.0	2.00	0.00	7,697.2	160.5	0.0	11,774,289.81	2,099,501.88	32° 25' 39.441 N	103° 30' 42.075 W
7,800.0	2.00	0.00	7,797.1	164.0	0.0	11,774,293.29	2,099,501.83	32° 25' 39.476 N	103° 30' 42.075 W
7,900.0	2.00	0.00	7,897.1	167.5	0.0	11,774,296.78	2,099,501.78	32° 25' 39.510 N	103° 30' 42.075 W
8,000.0	2.00	0.00	7,997.0	171.0	0.0	11,774,300.27	2,099,501.73	32° 25' 39.545 N	103° 30' 42.075 W
8,100.0	2.00	0.00	8,097.0	174.5	0.0	11,774,303.76	2,099,501.69	32° 25' 39.579 N	103° 30' 42.075 W
8,200.0	2.00	0.00	8,196.9	178.0	0.0	11,774,307.25	2,099,501.64	32° 25' 39.614 N	103° 30' 42.075 W
8,300.0	2.00	0.00	8,296.8	181.5	0.0	11,774,310.74	2,099,501.59	32° 25' 39.648 N	103° 30' 42.075 W
8,400.0	2.00	0.00	8,396.8	185.0	0.0	11,774,314.23	2,099,501.54	32° 25' 39.683 N	103° 30' 42.075 W
8,500.0	2.00	0.00	8,496.7	188.5	0.0	11,774,317.72	2,099,501.49	32° 25' 39.717 N	103° 30' 42.075 W
8,600.0	2.00	0.00	8,596.7	191.9	0.0	11,774,321.21	2,099,501.44	32° 25' 39.752 N	103° 30' 42.075 W
8,700.0	2.00	0.00	8,696.6	195.4	0.0	11,774,324.70	2,099,501.39	32° 25' 39.786 N	103° 30' 42.075 W
8,743.0	2.00	0.00	8,739.6	196.9	0.0	11,774,326.20	2,099,501.37	32° 25' 39.801 N	103° 30' 42.075 W
8,800.0	1.43	0.00	8,796.5	198.6	0.0	11,774,327.91	2,099,501.35	32° 25' 39.818 N	103° 30' 42.075 W
8,900.0	0.43	0.00	8,896.5	200.3	0.0	11,774,329.53	2,099,501.33	32° 25' 39.834 N	103° 30' 42.075 W
8,943.0	0.00	0.00	8,939.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,000.0	0.00	0.00	8,996.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,100.0	0.00	0.00	9,096.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,200.0	0.00	0.00	9,196.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,300.0	0.00	0.00	9,296.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,400.0	0.00	0.00	9,396.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,500.0	0.00	0.00	9,496.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,600.0	0.00	0.00	9,596.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,700.0	0.00	0.00	9,696.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,800.0	0.00	0.00	9,796.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,900.0	0.00	0.00	9,896.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,000.0	0.00	0.00	9,996.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,100.0	0.00	0.00	10,096.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,200.0	0.00	0.00	10,196.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,300.0	0.00	0.00	10,296.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,400.0	0.00	0.00	10,396.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,500.0	0.00	0.00	10,496.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W

Centennial Resource Dev

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well CRUNCH BERRY 6 FEDERAL COM 702H
Company:	NEW MEXICO	**TVD Reference:**	RKB=3632.5+25 @ 3657.5usft
Project:	LEA	**MD Reference:**	RKB=3632.5+25 @ 3657.5usft
Site:	CRUNCH BERRY	**North Reference:**	True
Well:	CRUNCH BERRY 6 FEDERAL COM 702H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CRUNCH BERRY 6 FEDERAL COM 702H		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,600.0	0.00	0.00	10,596.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,700.0	0.00	0.00	10,696.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,800.0	0.00	0.00	10,796.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,900.0	0.00	0.00	10,896.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,000.0	0.00	0.00	10,996.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,100.0	0.00	0.00	11,096.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,200.0	0.00	0.00	11,196.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,300.0	0.00	0.00	11,296.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,400.0	0.00	0.00	11,396.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,500.0	0.00	0.00	11,496.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,526.5	0.00	0.00	11,523.0	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,600.0	7.35	180.70	11,596.3	195.7	-0.1	11,774,324.99	2,099,501.33	32° 25' 39.789 N	103° 30' 42.075 W
11,700.0	17.35	180.70	11,693.9	174.4	-0.3	11,774,303.63	2,099,501.37	32° 25' 39.578 N	103° 30' 42.078 W
11,800.0	27.35	180.70	11,786.3	136.4	-0.8	11,774,265.66	2,099,501.43	32° 25' 39.202 N	103° 30' 42.084 W
11,900.0	37.35	180.70	11,870.6	83.0	-1.4	11,774,212.22	2,099,501.53	32° 25' 38.673 N	103° 30' 42.091 W
12,000.0	47.35	180.70	11,944.4	15.7	-2.3	11,774,144.94	2,099,501.64	32° 25' 38.008 N	103° 30' 42.101 W
12,100.0	57.35	180.70	12,005.4	-63.4	-3.2	11,774,065.87	2,099,501.78	32° 25' 37.225 N	103° 30' 42.112 W
12,200.0	67.35	180.70	12,051.8	-151.8	-4.3	11,773,977.40	2,099,501.93	32° 25' 36.350 N	103° 30' 42.125 W
12,300.0	77.35	180.70	12,082.1	-247.0	-5.5	11,773,882.23	2,099,502.09	32° 25' 35.408 N	103° 30' 42.138 W
12,400.0	87.35	180.70	12,095.4	-346.0	-6.7	11,773,783.25	2,099,502.26	32° 25' 34.428 N	103° 30' 42.153 W
12,426.5	90.00	180.70	12,096.0	-372.5	-7.0	11,773,756.74	2,099,502.31	32° 25' 34.166 N	103° 30' 42.156 W
12,500.0	90.00	180.68	12,096.0	-446.0	-7.9	11,773,683.26	2,099,502.45	32° 25' 33.439 N	103° 30' 42.167 W
12,600.0	90.00	180.65	12,096.0	-545.9	-9.0	11,773,583.26	2,099,502.68	32° 25' 32.449 N	103° 30' 42.180 W
12,700.0	90.00	180.62	12,096.0	-645.9	-10.2	11,773,483.26	2,099,502.96	32° 25' 31.460 N	103° 30' 42.193 W
12,800.0	90.00	180.60	12,096.0	-745.9	-11.2	11,773,383.26	2,099,503.28	32° 25' 30.470 N	103° 30' 42.206 W
12,900.0	90.00	180.57	12,096.0	-845.9	-12.2	11,773,283.26	2,099,503.66	32° 25' 29.481 N	103° 30' 42.218 W
13,000.0	90.00	180.54	12,096.0	-945.9	-13.2	11,773,183.26	2,099,504.08	32° 25' 28.491 N	103° 30' 42.229 W
13,100.0	90.00	180.51	12,096.0	-1,045.9	-14.1	11,773,083.27	2,099,504.55	32° 25' 27.501 N	103° 30' 42.240 W
13,200.0	90.00	180.49	12,096.0	-1,145.9	-15.0	11,772,983.27	2,099,505.07	32° 25' 26.512 N	103° 30' 42.250 W
13,300.0	90.00	180.46	12,096.0	-1,245.9	-15.8	11,772,883.27	2,099,505.63	32° 25' 25.522 N	103° 30' 42.260 W
13,400.0	90.00	180.43	12,096.0	-1,345.9	-16.6	11,772,783.27	2,099,506.25	32° 25' 24.533 N	103° 30' 42.269 W
13,500.0	90.00	180.41	12,096.0	-1,445.9	-17.4	11,772,683.27	2,099,506.91	32° 25' 23.543 N	103° 30' 42.277 W
13,600.0	90.00	180.38	12,096.0	-1,545.9	-18.0	11,772,583.28	2,099,507.62	32° 25' 22.553 N	103° 30' 42.285 W
13,700.0	90.00	180.35	12,096.0	-1,645.9	-18.7	11,772,483.28	2,099,508.38	32° 25' 21.564 N	103° 30' 42.292 W
13,800.0	90.00	180.32	12,096.0	-1,745.9	-19.3	11,772,383.28	2,099,509.19	32° 25' 20.574 N	103° 30' 42.299 W
13,900.0	90.00	180.30	12,096.0	-1,845.9	-19.8	11,772,283.29	2,099,510.04	32° 25' 19.584 N	103° 30' 42.306 W
14,000.0	90.00	180.27	12,096.0	-1,945.9	-20.3	11,772,183.29	2,099,510.94	32° 25' 18.595 N	103° 30' 42.311 W
14,100.0	90.00	180.24	12,096.0	-2,045.9	-20.7	11,772,083.30	2,099,511.89	32° 25' 17.605 N	103° 30' 42.317 W
14,200.0	90.00	180.21	12,096.0	-2,145.9	-21.1	11,771,983.30	2,099,512.89	32° 25' 16.616 N	103° 30' 42.321 W
14,300.0	90.00	180.19	12,096.0	-2,245.9	-21.5	11,771,883.31	2,099,513.94	32° 25' 15.626 N	103° 30' 42.325 W
14,400.0	90.00	180.16	12,096.0	-2,345.9	-21.8	11,771,783.31	2,099,515.03	32° 25' 14.636 N	103° 30' 42.329 W
14,500.0	90.00	180.13	12,096.0	-2,445.9	-22.0	11,771,683.32	2,099,516.17	32° 25' 13.647 N	103° 30' 42.332 W
14,600.0	90.00	180.10	12,096.0	-2,545.9	-22.2	11,771,583.33	2,099,517.36	32° 25' 12.657 N	103° 30' 42.334 W
14,700.0	90.00	180.08	12,096.0	-2,645.9	-22.4	11,771,483.33	2,099,518.60	32° 25' 11.667 N	103° 30' 42.336 W
14,800.0	90.00	180.05	12,096.0	-2,745.9	-22.5	11,771,383.34	2,099,519.89	32° 25' 10.678 N	103° 30' 42.337 W
14,900.0	90.00	180.02	12,096.0	-2,845.9	-22.5	11,771,283.35	2,099,521.22	32° 25' 9.688 N	103° 30' 42.338 W
15,000.0	90.00	179.99	12,096.0	-2,945.9	-22.6	11,771,183.36	2,099,522.60	32° 25' 8.698 N	103° 30' 42.338 W
15,100.0	90.00	179.97	12,096.0	-3,045.9	-22.5	11,771,083.37	2,099,524.03	32° 25' 7.709 N	103° 30' 42.337 W
15,200.0	90.00	179.94	12,096.0	-3,145.9	-22.4	11,770,983.38	2,099,525.51	32° 25' 6.719 N	103° 30' 42.336 W
15,300.0	90.00	179.91	12,096.0	-3,245.9	-22.3	11,770,883.39	2,099,527.03	32° 25' 5.730 N	103° 30' 42.335 W
15,400.0	90.00	179.88	12,096.0	-3,345.9	-22.1	11,770,783.41	2,099,528.61	32° 25' 4.740 N	103° 30' 42.333 W
15,500.0	90.00	179.86	12,096.0	-3,445.9	-21.9	11,770,683.42	2,099,530.23	32° 25' 3.750 N	103° 30' 42.330 W
15,600.0	90.00	179.83	12,096.0	-3,545.9	-21.6	11,770,583.44	2,099,531.90	32° 25' 2.761 N	103° 30' 42.327 W
15,680.4	90.00	179.81	12,096.0	-3,626.3	-21.4	11,770,503.06	2,099,533.27	32° 25' 1.965 N	103° 30' 42.324 W

Centennial Resource Dev

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well CRUNCH BERRY 6 FEDERAL COM 702H
Company:	NEW MEXICO	**TVD Reference:**	RKB=3632.5+25 @ 3657.5usft
Project:	LEA	**MD Reference:**	RKB=3632.5+25 @ 3657.5usft
Site:	CRUNCH BERRY	**North Reference:**	True
Well:	CRUNCH BERRY 6 FEDERAL COM 702H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CRUNCH BERRY 6 FEDERAL COM 702H		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,700.0	90.00	179.81	12,096.0	-3,645.9	-21.3	11,770,483.45	2,099,533.61	32° 25' 1.771 N	103° 30' 42.323 W
15,800.0	90.00	179.81	12,096.0	-3,745.9	-21.0	11,770,383.47	2,099,535.35	32° 25' 0.781 N	103° 30' 42.319 W
15,900.0	90.00	179.81	12,096.0	-3,845.9	-20.6	11,770,283.48	2,099,537.08	32° 24' 59.792 N	103° 30' 42.315 W
16,000.0	90.00	179.81	12,096.0	-3,945.9	-20.3	11,770,183.50	2,099,538.81	32° 24' 58.802 N	103° 30' 42.311 W
16,100.0	90.00	179.81	12,096.0	-4,045.9	-19.9	11,770,083.51	2,099,540.54	32° 24' 57.812 N	103° 30' 42.307 W
16,200.0	90.00	179.81	12,096.0	-4,145.9	-19.6	11,769,983.53	2,099,542.27	32° 24' 56.823 N	103° 30' 42.303 W
16,300.0	90.00	179.81	12,096.0	-4,245.9	-19.3	11,769,883.54	2,099,544.00	32° 24' 55.833 N	103° 30' 42.299 W
16,400.0	90.00	179.81	12,096.0	-4,345.9	-18.9	11,769,783.56	2,099,545.74	32° 24' 54.844 N	103° 30' 42.295 W
16,500.0	90.00	179.81	12,096.0	-4,445.9	-18.6	11,769,683.57	2,099,547.47	32° 24' 53.854 N	103° 30' 42.291 W
16,600.0	90.00	179.81	12,096.0	-4,545.9	-18.3	11,769,583.59	2,099,549.20	32° 24' 52.864 N	103° 30' 42.287 W
16,700.0	90.00	179.81	12,096.0	-4,645.9	-17.9	11,769,483.60	2,099,550.93	32° 24' 51.875 N	103° 30' 42.283 W
16,800.0	90.00	179.81	12,096.0	-4,745.9	-17.6	11,769,383.62	2,099,552.66	32° 24' 50.885 N	103° 30' 42.280 W
16,900.0	90.00	179.81	12,096.0	-4,845.9	-17.2	11,769,283.63	2,099,554.39	32° 24' 49.895 N	103° 30' 42.276 W
17,000.0	90.00	179.81	12,096.0	-4,945.9	-16.9	11,769,183.65	2,099,556.13	32° 24' 48.906 N	103° 30' 42.272 W
17,100.0	90.00	179.81	12,096.0	-5,045.9	-16.6	11,769,083.66	2,099,557.86	32° 24' 47.916 N	103° 30' 42.268 W
17,200.0	90.00	179.81	12,096.0	-5,145.9	-16.2	11,768,983.68	2,099,559.59	32° 24' 46.926 N	103° 30' 42.264 W
17,300.0	90.00	179.81	12,096.0	-5,245.9	-15.9	11,768,883.69	2,099,561.32	32° 24' 45.937 N	103° 30' 42.260 W
17,400.0	90.00	179.81	12,096.0	-5,345.9	-15.5	11,768,783.71	2,099,563.05	32° 24' 44.947 N	103° 30' 42.256 W
17,500.0	90.00	179.81	12,096.0	-5,445.9	-15.2	11,768,683.72	2,099,564.79	32° 24' 43.958 N	103° 30' 42.252 W
17,600.0	90.00	179.81	12,096.0	-5,545.9	-14.9	11,768,583.74	2,099,566.52	32° 24' 42.968 N	103° 30' 42.248 W
17,700.0	90.00	179.81	12,096.0	-5,645.9	-14.5	11,768,483.75	2,099,568.25	32° 24' 41.978 N	103° 30' 42.244 W
17,800.0	90.00	179.81	12,096.0	-5,745.9	-14.2	11,768,383.77	2,099,569.98	32° 24' 40.989 N	103° 30' 42.240 W
17,900.0	90.00	179.81	12,096.0	-5,845.9	-13.8	11,768,283.78	2,099,571.71	32° 24' 39.999 N	103° 30' 42.236 W
18,000.0	90.00	179.81	12,096.0	-5,945.9	-13.5	11,768,183.80	2,099,573.44	32° 24' 39.009 N	103° 30' 42.232 W
18,100.0	90.00	179.81	12,096.0	-6,045.9	-13.2	11,768,083.81	2,099,575.18	32° 24' 38.020 N	103° 30' 42.228 W
18,200.0	90.00	179.81	12,096.0	-6,145.9	-12.8	11,767,983.83	2,099,576.91	32° 24' 37.030 N	103° 30' 42.224 W
18,300.0	90.00	179.81	12,096.0	-6,245.9	-12.5	11,767,883.85	2,099,578.64	32° 24' 36.040 N	103° 30' 42.220 W
18,400.0	90.00	179.81	12,096.0	-6,345.9	-12.2	11,767,783.86	2,099,580.37	32° 24' 35.051 N	103° 30' 42.216 W
18,500.0	90.00	179.81	12,096.0	-6,445.9	-11.8	11,767,683.88	2,099,582.10	32° 24' 34.061 N	103° 30' 42.212 W
18,600.0	90.00	179.81	12,096.0	-6,545.9	-11.5	11,767,583.89	2,099,583.84	32° 24' 33.072 N	103° 30' 42.208 W
18,700.0	90.00	179.81	12,096.0	-6,645.9	-11.1	11,767,483.91	2,099,585.57	32° 24' 32.082 N	103° 30' 42.204 W
18,800.0	90.00	179.81	12,096.0	-6,745.9	-10.8	11,767,383.92	2,099,587.30	32° 24' 31.092 N	103° 30' 42.200 W
18,900.0	90.00	179.81	12,096.0	-6,845.9	-10.5	11,767,283.94	2,099,589.03	32° 24' 30.103 N	103° 30' 42.196 W
19,000.0	90.00	179.81	12,096.0	-6,945.9	-10.1	11,767,183.95	2,099,590.76	32° 24' 29.113 N	103° 30' 42.192 W
19,100.0	90.00	179.81	12,096.0	-7,045.9	-9.8	11,767,083.97	2,099,592.49	32° 24' 28.123 N	103° 30' 42.188 W
19,200.0	90.00	179.81	12,096.0	-7,145.9	-9.4	11,766,983.98	2,099,594.23	32° 24' 27.134 N	103° 30' 42.184 W
19,300.0	90.00	179.81	12,096.0	-7,245.9	-9.1	11,766,884.00	2,099,595.96	32° 24' 26.144 N	103° 30' 42.181 W
19,400.0	90.00	179.81	12,096.0	-7,345.9	-8.8	11,766,784.01	2,099,597.69	32° 24' 25.154 N	103° 30' 42.177 W
19,500.0	90.00	179.81	12,096.0	-7,445.9	-8.4	11,766,684.03	2,099,599.42	32° 24' 24.165 N	103° 30' 42.173 W
19,600.0	90.00	179.81	12,096.0	-7,545.9	-8.1	11,766,584.04	2,099,601.15	32° 24' 23.175 N	103° 30' 42.169 W
19,700.0	90.00	179.81	12,096.0	-7,645.9	-7.8	11,766,484.06	2,099,602.89	32° 24' 22.186 N	103° 30' 42.165 W
19,800.0	90.00	179.81	12,096.0	-7,745.9	-7.4	11,766,384.07	2,099,604.62	32° 24' 21.196 N	103° 30' 42.161 W
19,900.0	90.00	179.81	12,096.0	-7,845.9	-7.1	11,766,284.09	2,099,606.35	32° 24' 20.206 N	103° 30' 42.157 W
20,000.0	90.00	179.81	12,096.0	-7,945.9	-6.7	11,766,184.10	2,099,608.08	32° 24' 19.217 N	103° 30' 42.153 W
20,100.0	90.00	179.81	12,096.0	-8,045.9	-6.4	11,766,084.12	2,099,609.81	32° 24' 18.227 N	103° 30' 42.149 W
20,200.0	90.00	179.81	12,096.0	-8,145.9	-6.1	11,765,984.13	2,099,611.54	32° 24' 17.237 N	103° 30' 42.145 W
20,300.0	90.00	179.81	12,096.0	-8,245.9	-5.7	11,765,884.15	2,099,613.28	32° 24' 16.248 N	103° 30' 42.141 W
20,400.0	90.00	179.81	12,096.0	-8,345.9	-5.4	11,765,784.16	2,099,615.01	32° 24' 15.258 N	103° 30' 42.137 W
20,500.0	90.00	179.81	12,096.0	-8,445.9	-5.0	11,765,684.18	2,099,616.74	32° 24' 14.268 N	103° 30' 42.133 W
20,600.0	90.00	179.81	12,096.0	-8,545.9	-4.7	11,765,584.19	2,099,618.47	32° 24' 13.279 N	103° 30' 42.129 W
20,700.0	90.00	179.81	12,096.0	-8,645.9	-4.4	11,765,484.21	2,099,620.20	32° 24' 12.289 N	103° 30' 42.125 W
20,800.0	90.00	179.81	12,096.0	-8,745.9	-4.0	11,765,384.22	2,099,621.94	32° 24' 11.299 N	103° 30' 42.121 W
20,900.0	90.00	179.81	12,096.0	-8,845.8	-3.7	11,765,284.24	2,099,623.67	32° 24' 10.310 N	103° 30' 42.117 W
21,000.0	90.00	179.81	12,096.0	-8,945.8	-3.4	11,765,184.26	2,099,625.40	32° 24' 9.320 N	103° 30' 42.113 W

Centennial Resource Dev

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well CRUNCH BERRY 6 FEDERAL COM 702H
Company:	NEW MEXICO	**TVD Reference:**	RKB=3632.5+25 @ 3657.5usft
Project:	LEA	**MD Reference:**	RKB=3632.5+25 @ 3657.5usft
Site:	CRUNCH BERRY	**North Reference:**	True
Well:	CRUNCH BERRY 6 FEDERAL COM 702H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CRUNCH BERRY 6 FEDERAL COM 702H		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
21,100.0	90.00	179.81	12,096.0	-9,045.8	-3.0	11,765,084.27	2,099,627.13	32° 24' 8.331 N	103° 30' 42.109 W
21,200.0	90.00	179.81	12,096.0	-9,145.8	-2.7	11,764,984.29	2,099,628.86	32° 24' 7.341 N	103° 30' 42.105 W
21,300.0	90.00	179.81	12,096.0	-9,245.8	-2.3	11,764,884.30	2,099,630.59	32° 24' 6.351 N	103° 30' 42.101 W
21,400.0	90.00	179.81	12,096.0	-9,345.8	-2.0	11,764,784.32	2,099,632.33	32° 24' 5.362 N	103° 30' 42.097 W
21,500.0	90.00	179.81	12,096.0	-9,445.8	-1.7	11,764,684.33	2,099,634.06	32° 24' 4.372 N	103° 30' 42.093 W
21,600.0	90.00	179.81	12,096.0	-9,545.8	-1.3	11,764,584.35	2,099,635.79	32° 24' 3.382 N	103° 30' 42.089 W
21,700.0	90.00	179.81	12,096.0	-9,645.8	-1.0	11,764,484.36	2,099,637.52	32° 24' 2.393 N	103° 30' 42.085 W
21,800.0	90.00	179.81	12,096.0	-9,745.8	-0.6	11,764,384.38	2,099,639.25	32° 24' 1.403 N	103° 30' 42.081 W
21,900.0	90.00	179.81	12,096.0	-9,845.8	-0.3	11,764,284.39	2,099,640.99	32° 24' 0.413 N	103° 30' 42.077 W
22,000.0	90.00	179.81	12,096.0	-9,945.8	0.0	11,764,184.41	2,099,642.72	32° 23' 59.424 N	103° 30' 42.074 W
22,100.0	90.00	179.81	12,096.0	-10,045.8	0.4	11,764,084.42	2,099,644.45	32° 23' 58.434 N	103° 30' 42.070 W

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/BHL - CRUNCH BE	0.00	0.00	12,000.0	-10,164.7	0.9	11,763,965.61	2,099,646.68	32° 23' 57.258 N	103° 30' 42.063 W
- plan misses target center by 152.8usft at 22100.0usft MD (12096.0 TVD, -10045.8 N, 0.4 E)									
- Point									
FTP - CRUNCH BERRY	0.00	0.00	12,000.0	199.9	0.0	11,774,329.19	2,099,501.31	32° 25' 39.831 N	103° 30' 42.075 W
- plan misses target center by 172.4usft at 11916.8usft MD (11883.9 TVD, 72.6 N, -1.6 E)									
- Circle (radius 50.0)									

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.

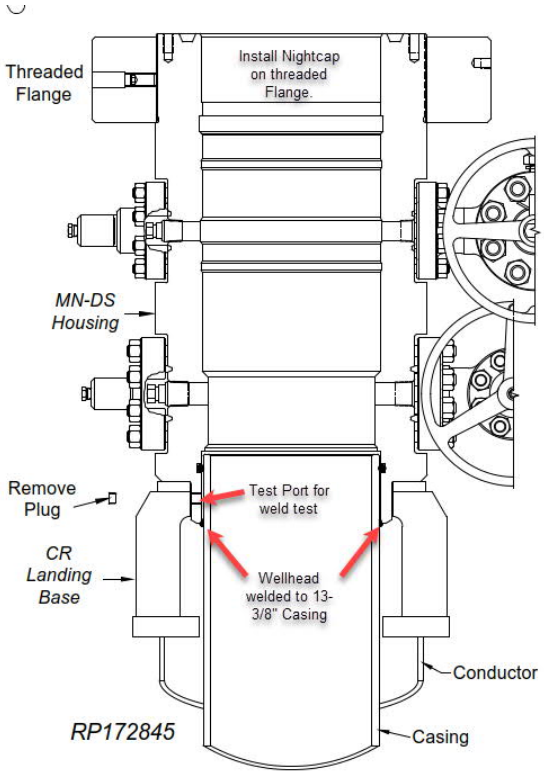


Illustration 1-1

- 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

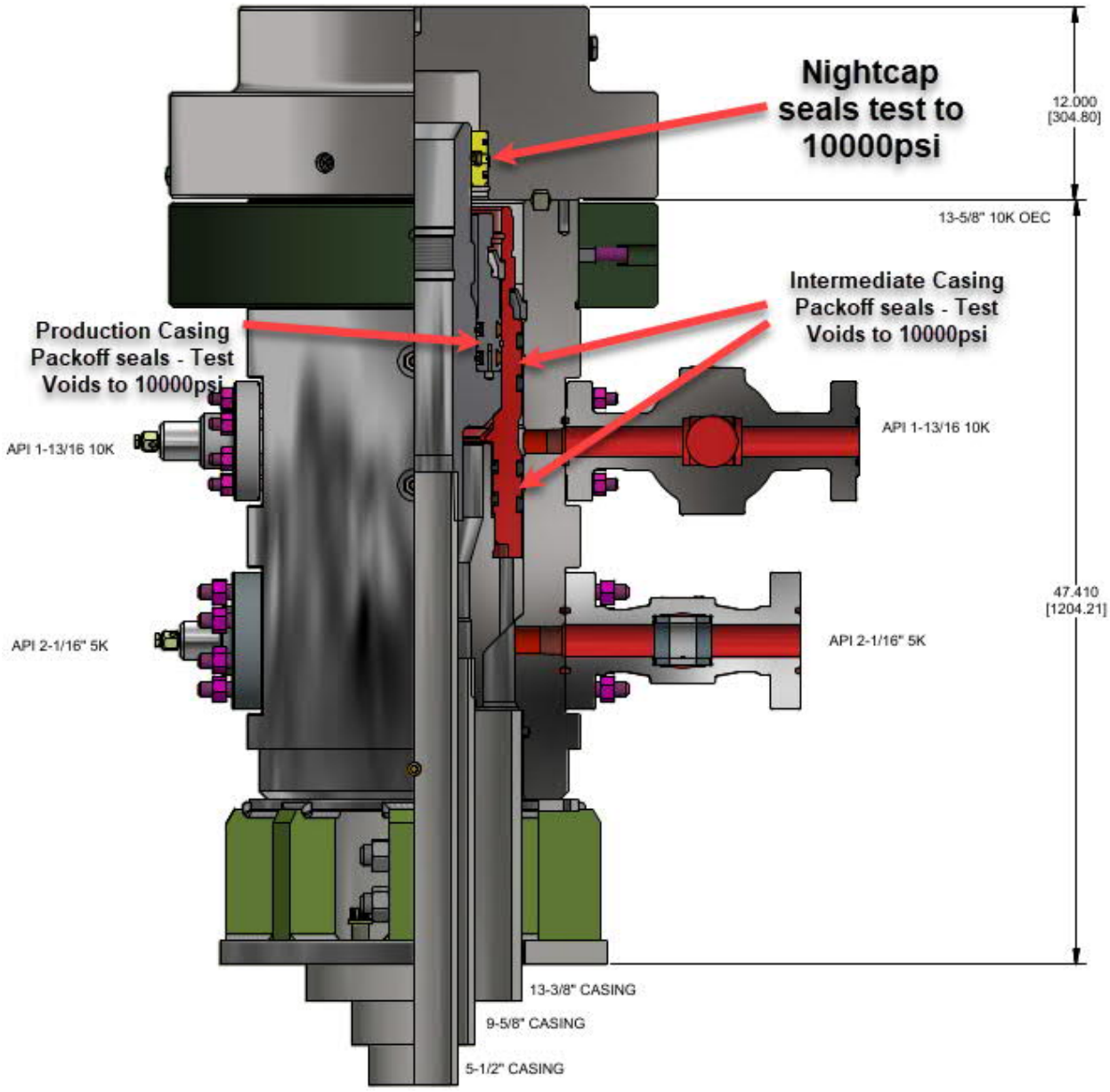
➢ Wolfcamp Formations

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.

CENTENNIAL
RESOURCE DEVELOPMENT, INC

Potash CONTINGENCY PLAN

CrunchBerry Fed Com 702H

Section 6

T 22S R 34E

Lea County, NM

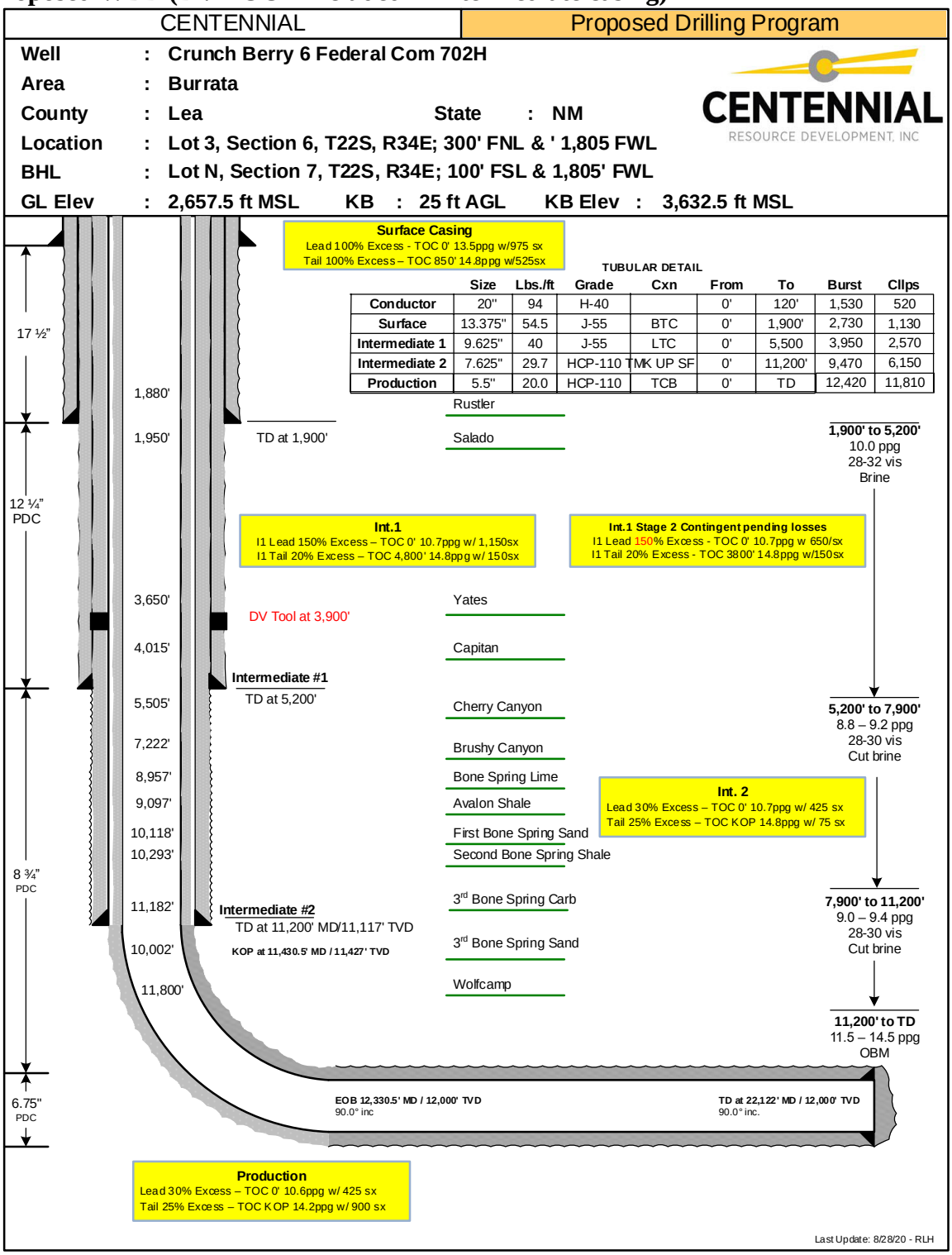
Initial Date: 8/27/20

Revision Date:

INTRODUCTION

This plan was developed in response to the event no cement is circulated on intermediate casing cement job.

Proposed WBD (DV TOOL included in intermediate casing)



Contingency Plan if no cement is circulated on 1st stage on intermediate cement job.

1. DV/ECP tool will be ran in the intermediate casing, it will be placed above the Captain formation. After the 1st stage is complete the rig will drop opening bomb, inflate the ECP and open DV tool to gain circulation. Circulate for 2 hours and prepare for 2nd stage.
2. Pump the 2nd stage cement.
3. In the event no cement is circulated on the 2nd stage a temperature log will be ran to determine the top of cement. A call to the BLM office will be made to discuss TOC.
4. If cement is tied into the surface string (1,700') we propose to move forward with operations
5. If cement is not tied into the surface string, we will work bring cement to surface on next string per COA.
6. Casing will be tested before drill out.

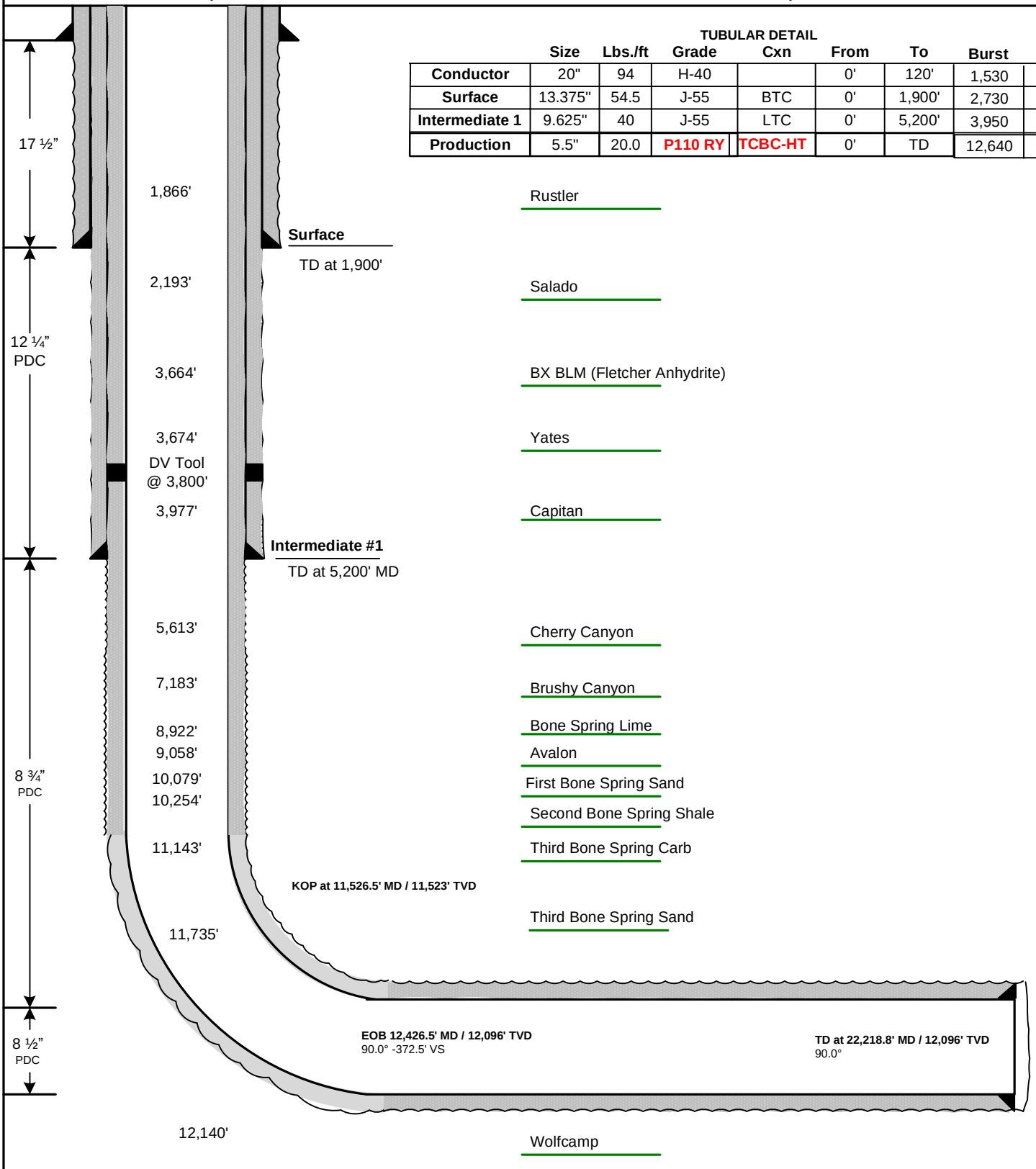
CENTENNIAL | WBD

Well : Crunch Berry 6 Fed Com 702H
Area : October Road **FM tgt:** 3rd BSS
County : Lea **State** : NM
Location : Lot 3 Section 6, T22S, R34E; 300' FNL & 1,805' FWL
BHL : Lot N, Section 7, T22S, R34E; 100' FSL & 1,298' FWL
KB Elev : 3,658.5' MSL **KB** : 26' AGL **GL Elev** : 3,632.5' MSL

CENTENNIAL RESOURCE DEVELOPMENT, INC

TUBULAR DETAIL

	Size	Lbs./ft	Grade	Cxn	From	To	Burst	Cllps
Conductor	20"	94	H-40		0'	120'	1,530	520
Surface	13.375"	54.5	J-55	BTC	0'	1,900'	2,730	1,130
Intermediate 1	9.625"	40	J-55	LTC	0'	5,200'	3,950	2,570
Production	5.5"	20.0	P110 RY	TCBC-HT	0'	TD	12,640	12,780

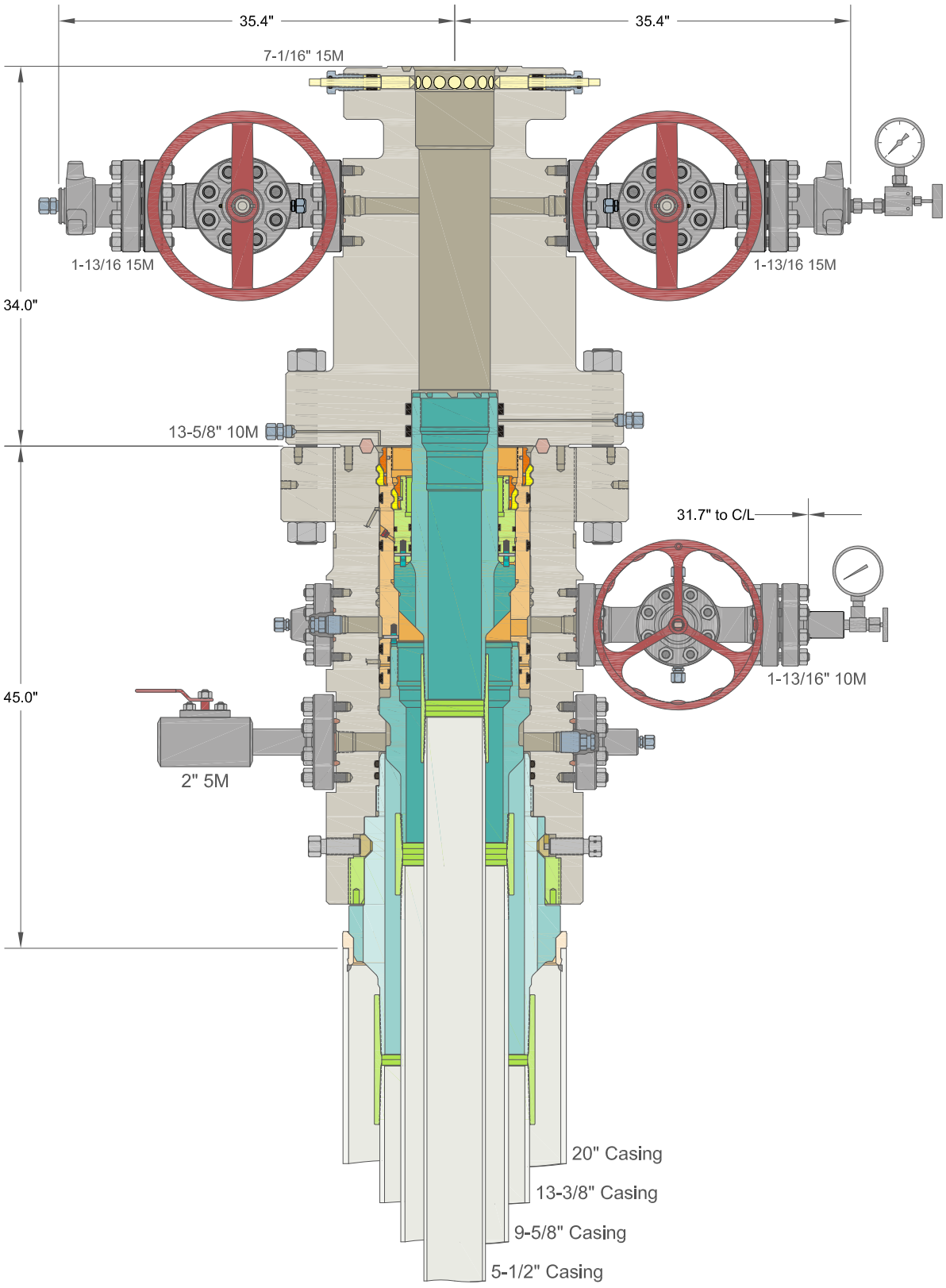


Woody 22 Fed Com 504H

Centennial Drilling Plan for 3-Casing String Bone Springs Formation

13-3/8" x 9-5/8" x 5-1/2" Casing Design

1. Drill 17-1/2" surface hole to Total Depth with Spudder Rig and perform wellbore cleanup cycles.
2. Run and land 13-3/8" casing to Depth.
3. Cement 13-3/8" casing – cement to surface.
4. Cut / Dress Conductor and 13-3/8" casing as needed, weld on Multi-bowl system with baseplate supported by 20" conductor.
5. Test Weld to 70% of 13-3/8" casing collapse. Place nightcap with Pressure Gauge on wellhead and test seals to 70% of Casing Collapse.
6. Bleed Pressure if necessary and remove nightcap. 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. Cement must have achieved 500psi compressive strength prior to test.
8. 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.
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 Casing with mandrel hanger in wellhead.
11. Cement 9-5/8 casing – cement to surface.
12. Washout stack then run wash tool in wellhead and wash hanger and pack-off setting area.
13. Install pack-off 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. Cement must have achieved 500psi compressive strength prior to test.
14. Install wear bushing then drill out 9-5/8" shoe-track 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 pack-off 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.



ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC	CENTENNIAL RESOURCE DEVELOPMENT LEE CO, NM		
20" x 13-3/8" x 9-5/8" x 5-1/2" 10M MBU-3T-CFL-R-DBLO System With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head, 20" Landing Ring & Pin Down Mandrel Casing Hangers	DRAWN	DLE	10JUN20
	APPRV		
	DRAWING NO.	HBE0000338	

GEOLOGIC PROG

CENTENNIAL RESOURCE DEVELOPMENT, LLC

WELL NAME	Crunch Berry 6 Fed Com 702H				3/31/2021			
AREA	October Road			API				
HZ TARGET	TBSG Sand (Basal)			WI %				
LAT LENGTH	10,000			AFE#				
TRRC PERMIT				COUNTY	Lea			

	TWNP	RNG	SECTION	FOOTAGE	COMMENT
SHL	22S	34E	6	300 FNL 1805 FWL	On lease drill N to S
FTP/PP	22S	34E	6	100 FNL 1298 FWL	
LTP	22S	34E	7	100 FSL 1298 FWL	
BHL	22S	34E	7	100 FSL 1298 FWL	

GROUND LEVEL	3,630'	RIG KB	26'	KB ELEV	3,656'		
GEOLOGIST	Isabel Harper	isabel.harper@cdevinc.com	(303) 589-8841				

LOGGING: No open hole logging.
MWD GR from drill out of surface casing to TD.

MUDLOGGING: Standard mud logging and mud gas detection.
Mud loggers on from drill out of 1st intermediate casing at ~xxx' to TD.

FORMATION	TVD	SSTVD	THICKNESS	FINAL MD	FINAL TVD	DELTA
Rustler	1,866'	1,790'	327'			
Salado	2,193'	1,463'	1,471'			
Base of Last Salt	3,664'	-8'	10'			
Yates	3,674'	-18'	303'			
Capitan	3,977'	-321'	1,636'			
Cherry Canyon	5,613'	-1,957'	340'			
Manzanita Lime	5,953'	-2,297'	1,230'			
Brushy Canyon	7,183'	-3,527'	1,739'			
Bone Spring Lime	8,922'	-5,266'	136'			
Avalon	9,058'	-5,402'	1,021'			
FBSG Sand	10,079'	-6,423'	175'			
SBSG Shale	10,254'	-6,598'	336'			
SBSG Sand	10,590'	-6,934'	553'			
TBSG Carb	11,143'	-7,487'	592'			
TBSG Sand	11,735'	-8,079'	405'			
Wolfcamp	12,140'	-8,484'				
HZ TARGET AT 0' VS	12,096'	-8,440'				

TARGET: KBTVD = 12,096' at 0' VS, INC = 90.0deg
Target Window +10/-10'

COMMENT: Regional dip estimated at 89.3°

GEOLOGIC PROG

OFFSET TYPE WELLS

CENTENNIAL RESOURCE DEVELOPMENT, LLC

DRILLING WELL	Crunch Berry 6 Fed Com 702H		3/31/2021		
HZ TARGET	TBSG Sand (Basal)		AREA	October Road	
PRIMARY TYPE LOG			SECONDARY TYPE LOG		
MESA VERDE FEDERAL 1					
30-025-37701					
LOCATION	22S/33E/1 1980 FSL 1980 FEL				
DISTANCE	4950' SW of SHL				
DIRECTION SURVEY	No				
KB ELEV	3,572'				

FORMATION	TVD	SSTVD	DELTA	TVD	SSTVD	DELTA
Rustler	1,762'	1,810'	327'			
Salado	2,089'	1,483'	1,471'			
Base of Last Salt	3,560'	12'	10'			
Yates	3,570'	2'	303'			
Capitan	3,873'	-301'	1,636'			
Cherry Canyon	5,509'	-1,937'	340'			
Manzanita Lime	5,849'	-2,277'	1,230'			
Brushy Canyon	7,079'	-3,507'	1,739'			
Bone Spring Lime	8,818'	-5,246'	136'			
Avalon	8,954'	-5,382'	1,021'			
FBSG Sand	9,975'	-6,403'	175'			
SBSG Shale	10,150'	-6,578'	336'			
SBSG Sand	10,486'	-6,914'	553'			
TBSG Carb	11,039'	-7,467'	592'			
TBSG Sand	11,631'	-8,059'	405'			
Wolfcamp	12,036'	-8,464'				
TGT Top	11,951'	-8,379'	73'			
TGT Base	12,024'	-8,452'				

Comments

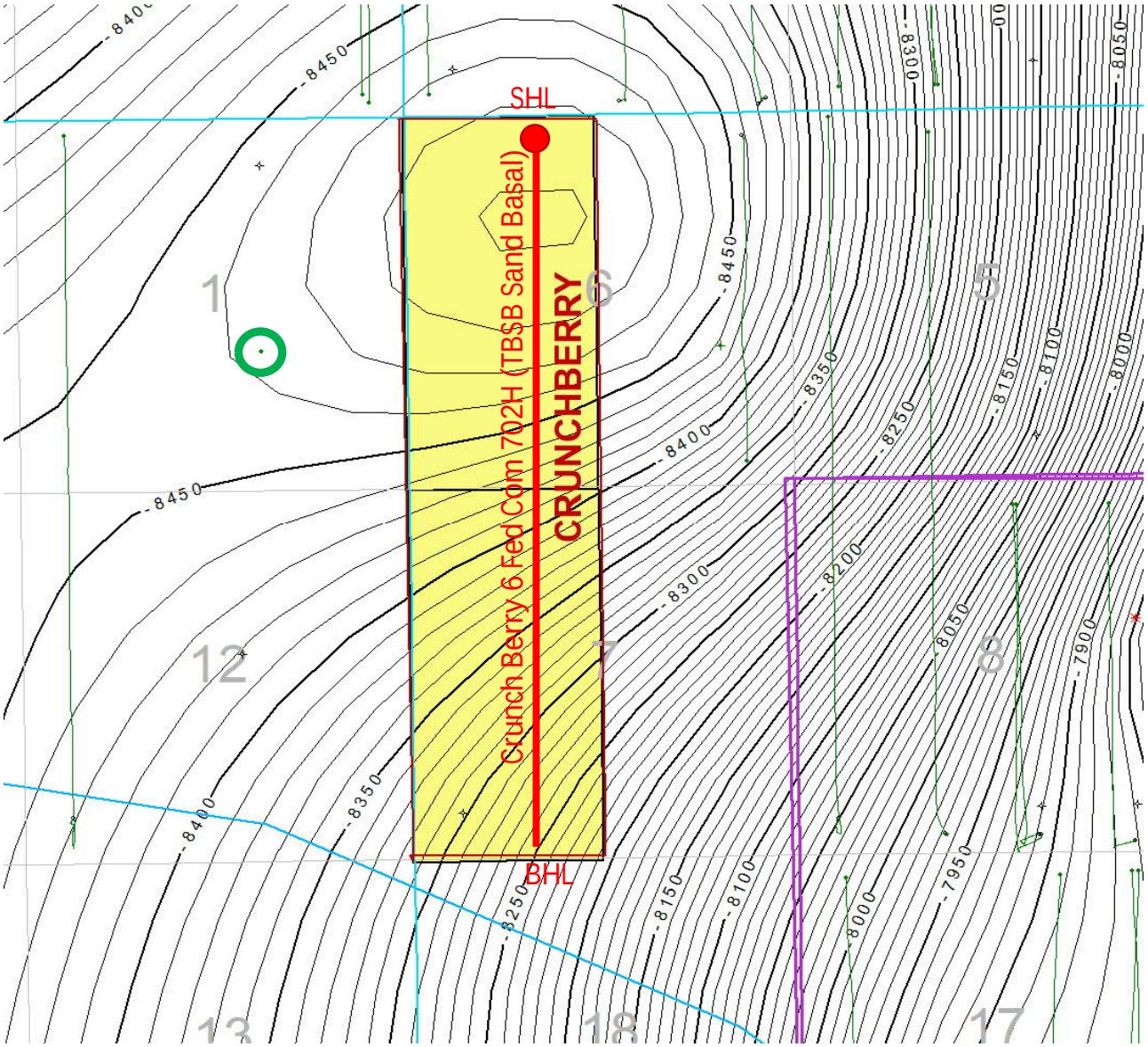
GEOLOGIC PROG

OFFSET TYPE WELLS

CENTENNIAL RESOURCE DEVELOPMENT, LLC

	DRILLING WELL	Crunch Berry 6 Fed Com 702H		3/31/2021
	HZ TARGET	TBSG Sand (Basal)	AREA	October Road
	PRIMARY TYPE LOG			SECONDARY TYPE LOG
	MESA VERDE FEDERAL 1			
	30-025-37701			0
LOCATION	22S/33E/1 1980 FSL 1980 FEL			
DISTANCE	4950' SW of SHL			
DIRECTION SURVEY	No			
KB ELEV	3,572'			

LOCATION & STRUCTURE MAP



WFMP Structure Map

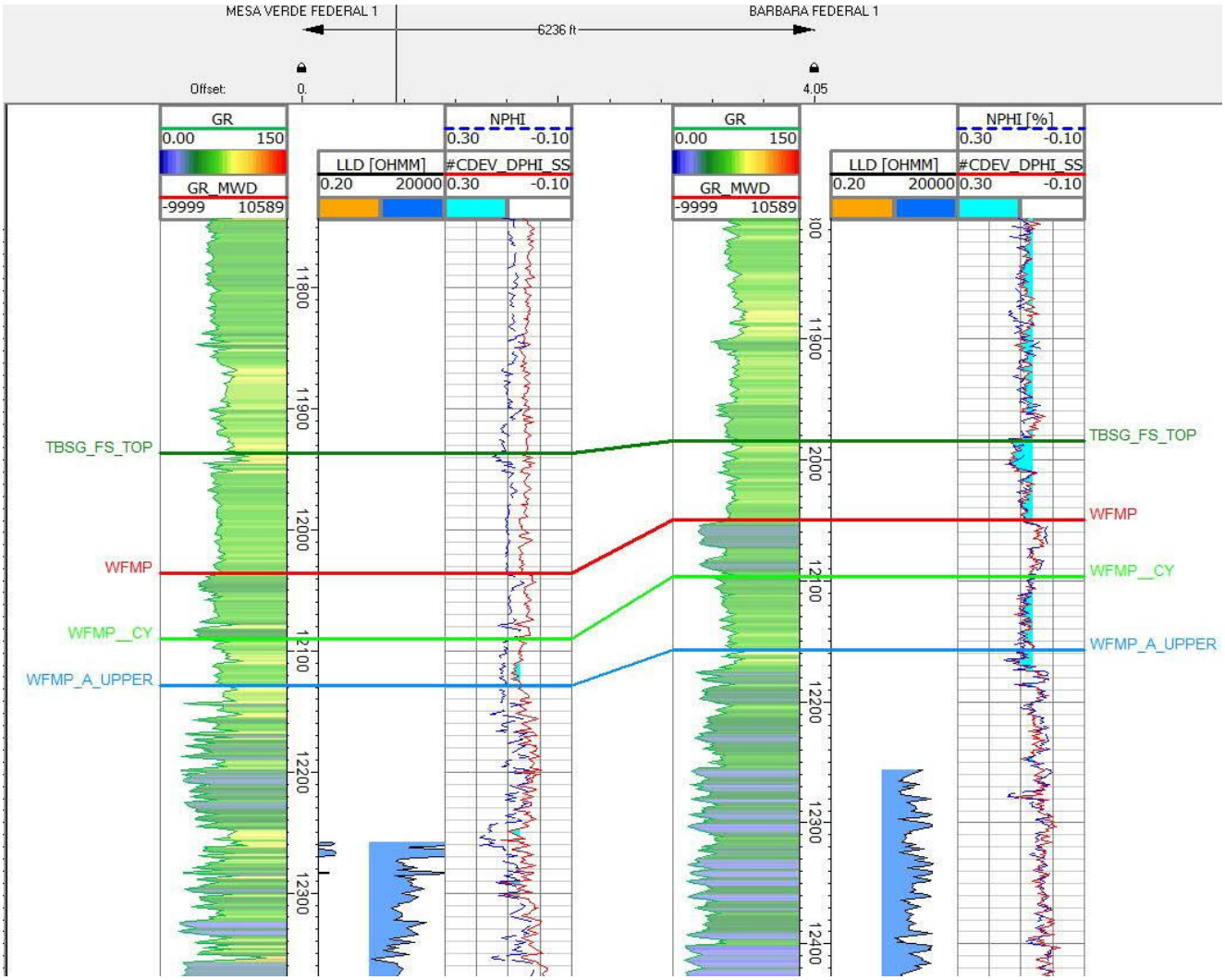
GEOLOGIC PROG

OFFSET TYPE SECTION

CENTENNIAL RESOURCE DEVELOPMENT, LLC

	DRILLING WELL	Crunch Berry 6 Fed Com 702H		3/31/2021
	HZ TARGET	TBSG Sand (Basal)	AREA	TBSG Sand (Basal)
	PRIMARY TYPE LOG			SECONDARY TYPE LOG
	MESA VERDE FEDERAL 1			
	30-025-37701			0
LOCATION	22S/33E/1 1980 FSL 1980 FEL			
DISTANCE	4950' SW of SHL			
DIRECTION SURVEY	No			
KB ELEV	3,572'			

Type Log and Targer Zone



GEOLOGIC PROG

GEOPHYSICAL DATA

POTENTIAL GEOHAZARDS

SEISMIC DISPLAYS

GEOLOGIC PROG

MUD LOG DISTRIBUTION DETAILS

CENTENNIAL RESOURCE DEVELOPMENT, LLC

WELL NAME	Crunch Berry 6 Fed Com 702H		3/31/2021
AREA	October Road	API	
HZ TARGET	TBSG Sand (Basal)	WI %	
LAT LENGTH	10000	AFE#	
TRRC PERMIT		COUNTY	Lea

GEOLOGIST	Isabel Harper	isabel.harper@cdevinc.com	(303) 589-8841

Mud Logging Company		
None		
Contact 1	email	phone
Contact 2	email	phone
Contact 3	email	phone

Daily distribution data requirements and protocol

Daily email distribution list

geodata@cdevinc.com; joe.woodske@cdevinc.com; Andrew.Welshhans@cdevinc.com; Nick.Daniele@cdevinc.com; Dawn.Billesbach@cdevinc.com; Isabel.Harper@cdevinc.com; Ronny.Hise@cdevinc.com

Final distribution list

Contact Information	Reports	Hard Copies	Digital data	Cuttings
Centennial Resource Development, c/o Joe Woodske, 1001 17th street, Suite 1800,	email final set	Digital Copies Only	email final set	
				No Dried Samples to be Collected
MWD Only: Centennial Resource Development, c/o Sarah Ferreyros, 1001 17th street, Suite 1800, Denver, CO, 80202	email final set	2 copies of the 5" MD vertical logs 2 copies of the 5" horizontal logs	email final set	

Project Geologist:	Isabel Harper	Production:	Brandon Morin
Operations Geologist:	Joe Woodske	Surface Land:	Bryan Troester
Drilling:	Ronny Hise	Mineral Land:	Gavin Smith

Centennial Resource Development - Well Control Plan

A. Component and Preventer Compatibility Table

Component	OD (inches)	Preventer	RWP
Drillpipe	5	Upper VBR: 3.5 – 5.5 Lower VBR: 3.5 – 5.5	10M
Heavyweight Drillpipe	5	Upper VBR: 3.5 – 5.5 Lower VBR: 3.5 – 5.5	10M
Drill collars and MWD tools	6 ¾	Annular	5M
Mud Motor	6 ¾	Annular	5M
Production Casing	5-1/2	Upper VBR: 3.5 – 5.5 Lower VBR: 3.5 – 5.5	10M
All	0 – 13 5/8	Annular	5M
Open-hole	-	Blind rams	10M

VBR = Variable Bore Rams

RWP = Rated Working Pressure

MWD = Measurement While Drilling (directional tools)

B. Well Control Procedures

I. General Procedures While Drilling:

1. Sound alarm (alert crew).
2. Space out drill-string.
3. Shut down pumps and stop rotary.
4. Open HCR
5. Shut-in well – utilizing upper VBRs.
6. Close choke
7. Confirm shut-in.
8. Notify rig manager and Centennial company representative.
9. Call Centennial drilling engineer
10. Read and record
    - I. Shut-in drillpipe pressure (SIDPP) and shut-in casing pressure (SCIP).
    - II. Pit gain
    - III. Time
11. Regroup, identify forward plan

II. General Procedure While Tripping

1. Sound alarm (alert crew).
2. Stab full opening safety valve and close
3. Space out drillstring.
4. Open HCR
5. Shut-in well – utilizing upper VBRs
6. Close choke
7. Confirm shut-in.
8. Notify rig manager and Centennial company representative.
9. Call Centennial drilling engineer
10. Read and record:
    I. SIDPP AND SICP
    II. Pit gain
    III. Time
11. Regroup and identify forward plan.

III. General Procedure While Running Casing

1. Sound alarm (alert crew)
2. Stab full opening safety valve and close
3. Space out string.
4. Open HCR
5. Shut-in well – utilizing upper VBRs.
6. Close choke
7. Confirm shut-in.
8. Notify rig manager and Centennial company representative.
9. Call Centennial drilling engineer
10. Read and record:
    I. SIDPP AND SICP
    II. Pit gain
    III. Time
11. Regroup and identify forward plan.

IV. General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Open HCR
3. Shut-in with blind rams
4. Close choke
5. Confirm shut-in
6. Notify rig manager and Centennial company representative.
7. Call Centennial drilling engineer
8. Read and record:
    I. SIDPP AND SICP
    II. Pit gain
    III. Time
9. Regroup and identify forward plan.

V. General Procedures While Pulling BHA Thru BOP Stack

1. **Prior to pulling last joint of drillpipe thru stack**:
   - I. Perform flow check, if flowing
     - a. Sound alarm, alert crew
     - b. Stab full opening safety valve and close
     - c. Space out drillstring with tool joint just beneath the upper pipe ram.
     - d. Open HCR
     - e. Shut-in utilizing upper VBRs
     - f. Close choke
     - g. Confirm shut-in
     - h. Notify rig manager and Centennial company representative.
     - i. Call Centennial drilling engineer
     - j. Read and record:
       - i. SIDPP and SICP
       - ii. Pit gain
       - iii. Time
   - II. Regroup and identify forward plan

2. **With BHA in the BOP stack and compatible ram preventer and pipe combo immediately available**:
   - a. Sound alarm, alert crew
   - b. Stab full opening safety valve and close
   - c. Space out drillstring with tool joint just beneath the upper pipe ram.
   - d. Open HCR
   - e. Shut-in utilizing upper VBRs
   - f. Close choke
   - g. Confirm shut-in
   - h. Notify rig manager and Centennial company representative.
   - i. Call Centennial drilling engineer
   - j. Read and record:
     - i. SIDPP and SICP
     - ii. Pit gain
     - iii. Time
   - II. Regroup and identify forward plan

3. **With BHA in the BOP stack and no compatible ram preventer and pipe combo immediately availiable**:
    I. Sound alarm, alert crew.
    II. If possible to pick up high enough, pull string clear of the stack and follow Open Hole (III) scenario.
    III. If impossible to pick up high enough to pull the string clear of the stack:
        a. Stab crossover, make up one joint/stand of drill pipe and full opening safety valve and close.
        b. Space out drillstring with tool joint just beneath the upper pipe ram.
        c. Open HCR
        d. Shut-in utilizing upper VBRs.
        e. Close choke
        f. Confirm shut-in
        g. Notify rig manager and Centennial company representative.
        h. Call Centennial drilling engineer
        i. Read and record:
            i. SIDPP and SICP
            ii. Pit gain
            iii. Time
    IV. Regroup and identify forward plan.

** **If annular is used to shut-in well and pressure builds to OR is expected to get to 50% of RWP, confirm space-out and swap to upper VBRs for shut-in.**

NEW MEXICO

LEA
CRUNCH BERRY
CRUNCH BERRY 6 FEDERAL COM 702H

CRUNCH BERRY 6 FEDERAL COM 702H

Plan: PWP0

Standard Planning Report - Geographic

11 April, 2021

Centennial Resource Dev

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well CRUNCH BERRY 6 FEDERAL COM 702H
Company:	NEW MEXICO	**TVD Reference:**	RKB=3632.5+25 @ 3657.5usft
Project:	LEA	**MD Reference:**	RKB=3632.5+25 @ 3657.5usft
Site:	CRUNCH BERRY	**North Reference:**	True
Well:	CRUNCH BERRY 6 FEDERAL COM 702H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CRUNCH BERRY 6 FEDERAL COM 702H		
Design:	PWP0		

Project LEA

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

Site CRUNCH BERRY

Site Position:		**Northing:**	0.00 usft	**Latitude:**	0° 0' 0.000 N
From:	Map	**Easting:**	0.00 usft	**Longitude:**	109° 29' 19.478 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.00 °

Well CRUNCH BERRY 6 FEDERAL COM 702H

Well Position	**+N/-S**	0.0 usft	**Northing:**	11,774,129.28 usft	**Latitude:**	32° 25' 37.852 N
	+E/-W	0.0 usft	**Easting:**	2,099,504.12 usft	**Longitude:**	103° 30' 42.075 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,632.5 usft

Wellbore CRUNCH BERRY 6 FEDERAL COM 702H

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	7.74	60.44	48,920.67874525

Design PWP0

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	180.00

Plan Survey Tool Program **Date** 4/11/2021

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	22,218.7	PWP0 (CRUNCH BERRY 6 FED	MWD+IFR1+MS OWSG_Rev2_ MWD + IFR1 +	

Centennial Resource Dev

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well CRUNCH BERRY 6 FEDERAL COM 702H
Company:	NEW MEXICO	**TVD Reference:**	RKB=3632.5+25 @ 3657.5usft
Project:	LEA	**MD Reference:**	RKB=3632.5+25 @ 3657.5usft
Site:	CRUNCH BERRY	**North Reference:**	True
Well:	CRUNCH BERRY 6 FEDERAL COM 702H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CRUNCH BERRY 6 FEDERAL COM 702H		
Design:	PWP0		

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	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,200.0	2.00	0.00	3,200.0	3.5	0.0	1.00	1.00	0.00	0.00	
8,743.0	2.00	0.00	8,739.6	196.9	0.0	0.00	0.00	0.00	0.00	
8,943.0	0.00	0.00	8,939.5	200.4	0.0	1.00	-1.00	0.00	180.00	
11,526.5	0.00	0.00	11,523.0	200.4	0.0	0.00	0.00	0.00	0.00	
12,426.5	90.00	180.70	12,096.0	-372.5	-7.0	10.00	10.00	0.00	180.70	
15,680.4	90.00	179.81	12,096.0	-3,626.3	-21.4	0.03	0.00	-0.03	-90.00	
22,218.8	90.00	179.81	12,096.0	-10,164.7	0.8	0.00	0.00	0.00	0.00	

Centennial Resource Dev

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well CRUNCH BERRY 6 FEDERAL COM 702H
Company:	NEW MEXICO	**TVD Reference:**	RKB=3632.5+25 @ 3657.5usft
Project:	LEA	**MD Reference:**	RKB=3632.5+25 @ 3657.5usft
Site:	CRUNCH BERRY	**North Reference:**	True
Well:	CRUNCH BERRY 6 FEDERAL COM 702H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CRUNCH BERRY 6 FEDERAL COM 702H		
Design:	PWP0		

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	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
100.0	0.00	0.00	100.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
200.0	0.00	0.00	200.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
300.0	0.00	0.00	300.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
400.0	0.00	0.00	400.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
500.0	0.00	0.00	500.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
600.0	0.00	0.00	600.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
700.0	0.00	0.00	700.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
800.0	0.00	0.00	800.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
900.0	0.00	0.00	900.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,100.0	0.00	0.00	1,100.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,200.0	0.00	0.00	1,200.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,300.0	0.00	0.00	1,300.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,500.0	0.00	0.00	1,500.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,600.0	0.00	0.00	1,600.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,700.0	0.00	0.00	1,700.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,800.0	0.00	0.00	1,800.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
1,900.0	0.00	0.00	1,900.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,000.0	0.00	0.00	2,000.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,100.0	0.00	0.00	2,100.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,200.0	0.00	0.00	2,200.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,300.0	0.00	0.00	2,300.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,400.0	0.00	0.00	2,400.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,500.0	0.00	0.00	2,500.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,600.0	0.00	0.00	2,600.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,700.0	0.00	0.00	2,700.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,800.0	0.00	0.00	2,800.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
2,900.0	0.00	0.00	2,900.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
3,000.0	0.00	0.00	3,000.0	0.0	0.0	11,774,129.28	2,099,504.12	32° 25' 37.852 N	103° 30' 42.075 W
3,100.0	1.00	0.00	3,100.0	0.9	0.0	11,774,130.16	2,099,504.10	32° 25' 37.861 N	103° 30' 42.075 W
3,200.0	2.00	0.00	3,200.0	3.5	0.0	11,774,132.77	2,099,504.07	32° 25' 37.887 N	103° 30' 42.075 W
3,300.0	2.00	0.00	3,299.9	7.0	0.0	11,774,136.26	2,099,504.02	32° 25' 37.921 N	103° 30' 42.075 W
3,400.0	2.00	0.00	3,399.8	10.5	0.0	11,774,139.75	2,099,503.97	32° 25' 37.956 N	103° 30' 42.075 W
3,500.0	2.00	0.00	3,499.8	14.0	0.0	11,774,143.24	2,099,503.92	32° 25' 37.990 N	103° 30' 42.075 W
3,600.0	2.00	0.00	3,599.7	17.4	0.0	11,774,146.73	2,099,503.87	32° 25' 38.025 N	103° 30' 42.075 W
3,700.0	2.00	0.00	3,699.6	20.9	0.0	11,774,150.22	2,099,503.83	32° 25' 38.059 N	103° 30' 42.075 W
3,800.0	2.00	0.00	3,799.6	24.4	0.0	11,774,153.71	2,099,503.78	32° 25' 38.094 N	103° 30' 42.075 W
3,900.0	2.00	0.00	3,899.5	27.9	0.0	11,774,157.20	2,099,503.73	32° 25' 38.129 N	103° 30' 42.075 W
4,000.0	2.00	0.00	3,999.5	31.4	0.0	11,774,160.69	2,099,503.68	32° 25' 38.163 N	103° 30' 42.075 W
4,100.0	2.00	0.00	4,099.4	34.9	0.0	11,774,164.18	2,099,503.63	32° 25' 38.198 N	103° 30' 42.075 W
4,200.0	2.00	0.00	4,199.3	38.4	0.0	11,774,167.67	2,099,503.58	32° 25' 38.232 N	103° 30' 42.075 W
4,300.0	2.00	0.00	4,299.3	41.9	0.0	11,774,171.16	2,099,503.53	32° 25' 38.267 N	103° 30' 42.075 W
4,400.0	2.00	0.00	4,399.2	45.4	0.0	11,774,174.65	2,099,503.48	32° 25' 38.301 N	103° 30' 42.075 W
4,500.0	2.00	0.00	4,499.2	48.9	0.0	11,774,178.14	2,099,503.44	32° 25' 38.336 N	103° 30' 42.075 W
4,600.0	2.00	0.00	4,599.1	52.3	0.0	11,774,181.63	2,099,503.39	32° 25' 38.370 N	103° 30' 42.075 W
4,700.0	2.00	0.00	4,699.0	55.8	0.0	11,774,185.12	2,099,503.34	32° 25' 38.405 N	103° 30' 42.075 W
4,800.0	2.00	0.00	4,799.0	59.3	0.0	11,774,188.61	2,099,503.29	32° 25' 38.439 N	103° 30' 42.075 W
4,900.0	2.00	0.00	4,898.9	62.8	0.0	11,774,192.10	2,099,503.24	32° 25' 38.474 N	103° 30' 42.075 W
5,000.0	2.00	0.00	4,998.9	66.3	0.0	11,774,195.59	2,099,503.19	32° 25' 38.508 N	103° 30' 42.075 W
5,100.0	2.00	0.00	5,098.8	69.8	0.0	11,774,199.08	2,099,503.14	32° 25' 38.543 N	103° 30' 42.075 W
5,200.0	2.00	0.00	5,198.7	73.3	0.0	11,774,202.56	2,099,503.10	32° 25' 38.578 N	103° 30' 42.075 W
5,300.0	2.00	0.00	5,298.7	76.8	0.0	11,774,206.05	2,099,503.05	32° 25' 38.612 N	103° 30' 42.075 W

Centennial Resource Dev

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well CRUNCH BERRY 6 FEDERAL COM 702H
Company:	NEW MEXICO	**TVD Reference:**	RKB=3632.5+25 @ 3657.5usft
Project:	LEA	**MD Reference:**	RKB=3632.5+25 @ 3657.5usft
Site:	CRUNCH BERRY	**North Reference:**	True
Well:	CRUNCH BERRY 6 FEDERAL COM 702H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CRUNCH BERRY 6 FEDERAL COM 702H		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,400.0	2.00	0.00	5,398.6	80.3	0.0	11,774,209.54	2,099,503.00	32° 25' 38.647 N	103° 30' 42.075 W
5,500.0	2.00	0.00	5,498.5	83.8	0.0	11,774,213.03	2,099,502.95	32° 25' 38.681 N	103° 30' 42.075 W
5,600.0	2.00	0.00	5,598.5	87.2	0.0	11,774,216.52	2,099,502.90	32° 25' 38.716 N	103° 30' 42.075 W
5,700.0	2.00	0.00	5,698.4	90.7	0.0	11,774,220.01	2,099,502.85	32° 25' 38.750 N	103° 30' 42.075 W
5,800.0	2.00	0.00	5,798.4	94.2	0.0	11,774,223.50	2,099,502.80	32° 25' 38.785 N	103° 30' 42.075 W
5,900.0	2.00	0.00	5,898.3	97.7	0.0	11,774,226.99	2,099,502.76	32° 25' 38.819 N	103° 30' 42.075 W
6,000.0	2.00	0.00	5,998.2	101.2	0.0	11,774,230.48	2,099,502.71	32° 25' 38.854 N	103° 30' 42.075 W
6,100.0	2.00	0.00	6,098.2	104.7	0.0	11,774,233.97	2,099,502.66	32° 25' 38.888 N	103° 30' 42.075 W
6,200.0	2.00	0.00	6,198.1	108.2	0.0	11,774,237.46	2,099,502.61	32° 25' 38.923 N	103° 30' 42.075 W
6,300.0	2.00	0.00	6,298.1	111.7	0.0	11,774,240.95	2,099,502.56	32° 25' 38.957 N	103° 30' 42.075 W
6,400.0	2.00	0.00	6,398.0	115.2	0.0	11,774,244.44	2,099,502.51	32° 25' 38.992 N	103° 30' 42.075 W
6,500.0	2.00	0.00	6,497.9	118.7	0.0	11,774,247.93	2,099,502.46	32° 25' 39.027 N	103° 30' 42.075 W
6,600.0	2.00	0.00	6,597.9	122.1	0.0	11,774,251.42	2,099,502.42	32° 25' 39.061 N	103° 30' 42.075 W
6,700.0	2.00	0.00	6,697.8	125.6	0.0	11,774,254.91	2,099,502.37	32° 25' 39.096 N	103° 30' 42.075 W
6,800.0	2.00	0.00	6,797.8	129.1	0.0	11,774,258.40	2,099,502.32	32° 25' 39.130 N	103° 30' 42.075 W
6,900.0	2.00	0.00	6,897.7	132.6	0.0	11,774,261.89	2,099,502.27	32° 25' 39.165 N	103° 30' 42.075 W
7,000.0	2.00	0.00	6,997.6	136.1	0.0	11,774,265.38	2,099,502.22	32° 25' 39.199 N	103° 30' 42.075 W
7,100.0	2.00	0.00	7,097.6	139.6	0.0	11,774,268.87	2,099,502.17	32° 25' 39.234 N	103° 30' 42.075 W
7,200.0	2.00	0.00	7,197.5	143.1	0.0	11,774,272.36	2,099,502.12	32° 25' 39.268 N	103° 30' 42.075 W
7,300.0	2.00	0.00	7,297.4	146.6	0.0	11,774,275.85	2,099,502.07	32° 25' 39.303 N	103° 30' 42.075 W
7,400.0	2.00	0.00	7,397.4	150.1	0.0	11,774,279.34	2,099,502.03	32° 25' 39.337 N	103° 30' 42.075 W
7,500.0	2.00	0.00	7,497.3	153.6	0.0	11,774,282.83	2,099,501.98	32° 25' 39.372 N	103° 30' 42.075 W
7,600.0	2.00	0.00	7,597.3	157.0	0.0	11,774,286.32	2,099,501.93	32° 25' 39.406 N	103° 30' 42.075 W
7,700.0	2.00	0.00	7,697.2	160.5	0.0	11,774,289.81	2,099,501.88	32° 25' 39.441 N	103° 30' 42.075 W
7,800.0	2.00	0.00	7,797.1	164.0	0.0	11,774,293.29	2,099,501.83	32° 25' 39.476 N	103° 30' 42.075 W
7,900.0	2.00	0.00	7,897.1	167.5	0.0	11,774,296.78	2,099,501.78	32° 25' 39.510 N	103° 30' 42.075 W
8,000.0	2.00	0.00	7,997.0	171.0	0.0	11,774,300.27	2,099,501.73	32° 25' 39.545 N	103° 30' 42.075 W
8,100.0	2.00	0.00	8,097.0	174.5	0.0	11,774,303.76	2,099,501.69	32° 25' 39.579 N	103° 30' 42.075 W
8,200.0	2.00	0.00	8,196.9	178.0	0.0	11,774,307.25	2,099,501.64	32° 25' 39.614 N	103° 30' 42.075 W
8,300.0	2.00	0.00	8,296.8	181.5	0.0	11,774,310.74	2,099,501.59	32° 25' 39.648 N	103° 30' 42.075 W
8,400.0	2.00	0.00	8,396.8	185.0	0.0	11,774,314.23	2,099,501.54	32° 25' 39.683 N	103° 30' 42.075 W
8,500.0	2.00	0.00	8,496.7	188.5	0.0	11,774,317.72	2,099,501.49	32° 25' 39.717 N	103° 30' 42.075 W
8,600.0	2.00	0.00	8,596.7	191.9	0.0	11,774,321.21	2,099,501.44	32° 25' 39.752 N	103° 30' 42.075 W
8,700.0	2.00	0.00	8,696.6	195.4	0.0	11,774,324.70	2,099,501.39	32° 25' 39.786 N	103° 30' 42.075 W
8,743.0	2.00	0.00	8,739.6	196.9	0.0	11,774,326.20	2,099,501.37	32° 25' 39.801 N	103° 30' 42.075 W
8,800.0	1.43	0.00	8,796.5	198.6	0.0	11,774,327.91	2,099,501.35	32° 25' 39.818 N	103° 30' 42.075 W
8,900.0	0.43	0.00	8,896.5	200.3	0.0	11,774,329.53	2,099,501.33	32° 25' 39.834 N	103° 30' 42.075 W
8,943.0	0.00	0.00	8,939.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,000.0	0.00	0.00	8,996.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,100.0	0.00	0.00	9,096.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,200.0	0.00	0.00	9,196.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,300.0	0.00	0.00	9,296.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,400.0	0.00	0.00	9,396.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,500.0	0.00	0.00	9,496.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,600.0	0.00	0.00	9,596.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,700.0	0.00	0.00	9,696.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,800.0	0.00	0.00	9,796.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
9,900.0	0.00	0.00	9,896.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,000.0	0.00	0.00	9,996.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,100.0	0.00	0.00	10,096.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,200.0	0.00	0.00	10,196.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,300.0	0.00	0.00	10,296.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,400.0	0.00	0.00	10,396.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,500.0	0.00	0.00	10,496.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W

Centennial Resource Dev

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well CRUNCH BERRY 6 FEDERAL COM 702H
Company:	NEW MEXICO	**TVD Reference:**	RKB=3632.5+25 @ 3657.5usft
Project:	LEA	**MD Reference:**	RKB=3632.5+25 @ 3657.5usft
Site:	CRUNCH BERRY	**North Reference:**	True
Well:	CRUNCH BERRY 6 FEDERAL COM 702H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CRUNCH BERRY 6 FEDERAL COM 702H		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,600.0	0.00	0.00	10,596.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,700.0	0.00	0.00	10,696.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,800.0	0.00	0.00	10,796.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
10,900.0	0.00	0.00	10,896.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,000.0	0.00	0.00	10,996.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,100.0	0.00	0.00	11,096.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,200.0	0.00	0.00	11,196.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,300.0	0.00	0.00	11,296.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,400.0	0.00	0.00	11,396.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,500.0	0.00	0.00	11,496.5	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,526.5	0.00	0.00	11,523.0	200.4	0.0	11,774,329.69	2,099,501.32	32° 25' 39.836 N	103° 30' 42.075 W
11,600.0	7.35	180.70	11,596.3	195.7	-0.1	11,774,324.99	2,099,501.33	32° 25' 39.789 N	103° 30' 42.075 W
11,700.0	17.35	180.70	11,693.9	174.4	-0.3	11,774,303.63	2,099,501.37	32° 25' 39.578 N	103° 30' 42.078 W
11,800.0	27.35	180.70	11,786.3	136.4	-0.8	11,774,265.66	2,099,501.43	32° 25' 39.202 N	103° 30' 42.084 W
11,900.0	37.35	180.70	11,870.6	83.0	-1.4	11,774,212.22	2,099,501.53	32° 25' 38.673 N	103° 30' 42.091 W
12,000.0	47.35	180.70	11,944.4	15.7	-2.3	11,774,144.94	2,099,501.64	32° 25' 38.008 N	103° 30' 42.101 W
12,100.0	57.35	180.70	12,005.4	-63.4	-3.2	11,774,065.87	2,099,501.78	32° 25' 37.225 N	103° 30' 42.112 W
12,200.0	67.35	180.70	12,051.8	-151.8	-4.3	11,773,977.40	2,099,501.93	32° 25' 36.350 N	103° 30' 42.125 W
12,300.0	77.35	180.70	12,082.1	-247.0	-5.5	11,773,882.23	2,099,502.09	32° 25' 35.408 N	103° 30' 42.138 W
12,400.0	87.35	180.70	12,095.4	-346.0	-6.7	11,773,783.25	2,099,502.26	32° 25' 34.428 N	103° 30' 42.153 W
12,426.5	90.00	180.70	12,096.0	-372.5	-7.0	11,773,756.74	2,099,502.31	32° 25' 34.166 N	103° 30' 42.156 W
12,500.0	90.00	180.68	12,096.0	-446.0	-7.9	11,773,683.26	2,099,502.45	32° 25' 33.439 N	103° 30' 42.167 W
12,600.0	90.00	180.65	12,096.0	-545.9	-9.0	11,773,583.26	2,099,502.68	32° 25' 32.449 N	103° 30' 42.180 W
12,700.0	90.00	180.62	12,096.0	-645.9	-10.2	11,773,483.26	2,099,502.96	32° 25' 31.460 N	103° 30' 42.193 W
12,800.0	90.00	180.60	12,096.0	-745.9	-11.2	11,773,383.26	2,099,503.28	32° 25' 30.470 N	103° 30' 42.206 W
12,900.0	90.00	180.57	12,096.0	-845.9	-12.2	11,773,283.26	2,099,503.66	32° 25' 29.481 N	103° 30' 42.218 W
13,000.0	90.00	180.54	12,096.0	-945.9	-13.2	11,773,183.26	2,099,504.08	32° 25' 28.491 N	103° 30' 42.229 W
13,100.0	90.00	180.51	12,096.0	-1,045.9	-14.1	11,773,083.27	2,099,504.55	32° 25' 27.501 N	103° 30' 42.240 W
13,200.0	90.00	180.49	12,096.0	-1,145.9	-15.0	11,772,983.27	2,099,505.07	32° 25' 26.512 N	103° 30' 42.250 W
13,300.0	90.00	180.46	12,096.0	-1,245.9	-15.8	11,772,883.27	2,099,505.63	32° 25' 25.522 N	103° 30' 42.260 W
13,400.0	90.00	180.43	12,096.0	-1,345.9	-16.6	11,772,783.27	2,099,506.25	32° 25' 24.533 N	103° 30' 42.269 W
13,500.0	90.00	180.41	12,096.0	-1,445.9	-17.4	11,772,683.27	2,099,506.91	32° 25' 23.543 N	103° 30' 42.277 W
13,600.0	90.00	180.38	12,096.0	-1,545.9	-18.0	11,772,583.28	2,099,507.62	32° 25' 22.553 N	103° 30' 42.285 W
13,700.0	90.00	180.35	12,096.0	-1,645.9	-18.7	11,772,483.28	2,099,508.38	32° 25' 21.564 N	103° 30' 42.292 W
13,800.0	90.00	180.32	12,096.0	-1,745.9	-19.3	11,772,383.28	2,099,509.19	32° 25' 20.574 N	103° 30' 42.299 W
13,900.0	90.00	180.30	12,096.0	-1,845.9	-19.8	11,772,283.29	2,099,510.04	32° 25' 19.584 N	103° 30' 42.306 W
14,000.0	90.00	180.27	12,096.0	-1,945.9	-20.3	11,772,183.29	2,099,510.94	32° 25' 18.595 N	103° 30' 42.311 W
14,100.0	90.00	180.24	12,096.0	-2,045.9	-20.7	11,772,083.30	2,099,511.89	32° 25' 17.605 N	103° 30' 42.317 W
14,200.0	90.00	180.21	12,096.0	-2,145.9	-21.1	11,771,983.30	2,099,512.89	32° 25' 16.616 N	103° 30' 42.321 W
14,300.0	90.00	180.19	12,096.0	-2,245.9	-21.5	11,771,883.31	2,099,513.94	32° 25' 15.626 N	103° 30' 42.325 W
14,400.0	90.00	180.16	12,096.0	-2,345.9	-21.8	11,771,783.31	2,099,515.03	32° 25' 14.636 N	103° 30' 42.329 W
14,500.0	90.00	180.13	12,096.0	-2,445.9	-22.0	11,771,683.32	2,099,516.17	32° 25' 13.647 N	103° 30' 42.332 W
14,600.0	90.00	180.10	12,096.0	-2,545.9	-22.2	11,771,583.33	2,099,517.36	32° 25' 12.657 N	103° 30' 42.334 W
14,700.0	90.00	180.08	12,096.0	-2,645.9	-22.4	11,771,483.33	2,099,518.60	32° 25' 11.667 N	103° 30' 42.336 W
14,800.0	90.00	180.05	12,096.0	-2,745.9	-22.5	11,771,383.34	2,099,519.89	32° 25' 10.678 N	103° 30' 42.337 W
14,900.0	90.00	180.02	12,096.0	-2,845.9	-22.5	11,771,283.35	2,099,521.22	32° 25' 9.688 N	103° 30' 42.338 W
15,000.0	90.00	179.99	12,096.0	-2,945.9	-22.6	11,771,183.36	2,099,522.60	32° 25' 8.698 N	103° 30' 42.338 W
15,100.0	90.00	179.97	12,096.0	-3,045.9	-22.5	11,771,083.37	2,099,524.03	32° 25' 7.709 N	103° 30' 42.337 W
15,200.0	90.00	179.94	12,096.0	-3,145.9	-22.4	11,770,983.38	2,099,525.51	32° 25' 6.719 N	103° 30' 42.336 W
15,300.0	90.00	179.91	12,096.0	-3,245.9	-22.3	11,770,883.39	2,099,527.03	32° 25' 5.730 N	103° 30' 42.335 W
15,400.0	90.00	179.88	12,096.0	-3,345.9	-22.1	11,770,783.41	2,099,528.61	32° 25' 4.740 N	103° 30' 42.333 W
15,500.0	90.00	179.86	12,096.0	-3,445.9	-21.9	11,770,683.42	2,099,530.23	32° 25' 3.750 N	103° 30' 42.330 W
15,600.0	90.00	179.83	12,096.0	-3,545.9	-21.6	11,770,583.44	2,099,531.90	32° 25' 2.761 N	103° 30' 42.327 W
15,680.4	90.00	179.81	12,096.0	-3,626.3	-21.4	11,770,503.06	2,099,533.27	32° 25' 1.965 N	103° 30' 42.324 W

Centennial Resource Dev

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well CRUNCH BERRY 6 FEDERAL COM 702H
Company:	NEW MEXICO	**TVD Reference:**	RKB=3632.5+25 @ 3657.5usft
Project:	LEA	**MD Reference:**	RKB=3632.5+25 @ 3657.5usft
Site:	CRUNCH BERRY	**North Reference:**	True
Well:	CRUNCH BERRY 6 FEDERAL COM 702H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CRUNCH BERRY 6 FEDERAL COM 702H		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,700.0	90.00	179.81	12,096.0	-3,645.9	-21.3	11,770,483.45	2,099,533.61	32° 25' 1.771 N	103° 30' 42.323 W
15,800.0	90.00	179.81	12,096.0	-3,745.9	-21.0	11,770,383.47	2,099,535.35	32° 25' 0.781 N	103° 30' 42.319 W
15,900.0	90.00	179.81	12,096.0	-3,845.9	-20.6	11,770,283.48	2,099,537.08	32° 24' 59.792 N	103° 30' 42.315 W
16,000.0	90.00	179.81	12,096.0	-3,945.9	-20.3	11,770,183.50	2,099,538.81	32° 24' 58.802 N	103° 30' 42.311 W
16,100.0	90.00	179.81	12,096.0	-4,045.9	-19.9	11,770,083.51	2,099,540.54	32° 24' 57.812 N	103° 30' 42.307 W
16,200.0	90.00	179.81	12,096.0	-4,145.9	-19.6	11,769,983.53	2,099,542.27	32° 24' 56.823 N	103° 30' 42.303 W
16,300.0	90.00	179.81	12,096.0	-4,245.9	-19.3	11,769,883.54	2,099,544.00	32° 24' 55.833 N	103° 30' 42.299 W
16,400.0	90.00	179.81	12,096.0	-4,345.9	-18.9	11,769,783.56	2,099,545.74	32° 24' 54.844 N	103° 30' 42.295 W
16,500.0	90.00	179.81	12,096.0	-4,445.9	-18.6	11,769,683.57	2,099,547.47	32° 24' 53.854 N	103° 30' 42.291 W
16,600.0	90.00	179.81	12,096.0	-4,545.9	-18.3	11,769,583.59	2,099,549.20	32° 24' 52.864 N	103° 30' 42.287 W
16,700.0	90.00	179.81	12,096.0	-4,645.9	-17.9	11,769,483.60	2,099,550.93	32° 24' 51.875 N	103° 30' 42.283 W
16,800.0	90.00	179.81	12,096.0	-4,745.9	-17.6	11,769,383.62	2,099,552.66	32° 24' 50.885 N	103° 30' 42.280 W
16,900.0	90.00	179.81	12,096.0	-4,845.9	-17.2	11,769,283.63	2,099,554.39	32° 24' 49.895 N	103° 30' 42.276 W
17,000.0	90.00	179.81	12,096.0	-4,945.9	-16.9	11,769,183.65	2,099,556.13	32° 24' 48.906 N	103° 30' 42.272 W
17,100.0	90.00	179.81	12,096.0	-5,045.9	-16.6	11,769,083.66	2,099,557.86	32° 24' 47.916 N	103° 30' 42.268 W
17,200.0	90.00	179.81	12,096.0	-5,145.9	-16.2	11,768,983.68	2,099,559.59	32° 24' 46.926 N	103° 30' 42.264 W
17,300.0	90.00	179.81	12,096.0	-5,245.9	-15.9	11,768,883.69	2,099,561.32	32° 24' 45.937 N	103° 30' 42.260 W
17,400.0	90.00	179.81	12,096.0	-5,345.9	-15.5	11,768,783.71	2,099,563.05	32° 24' 44.947 N	103° 30' 42.256 W
17,500.0	90.00	179.81	12,096.0	-5,445.9	-15.2	11,768,683.72	2,099,564.79	32° 24' 43.958 N	103° 30' 42.252 W
17,600.0	90.00	179.81	12,096.0	-5,545.9	-14.9	11,768,583.74	2,099,566.52	32° 24' 42.968 N	103° 30' 42.248 W
17,700.0	90.00	179.81	12,096.0	-5,645.9	-14.5	11,768,483.75	2,099,568.25	32° 24' 41.978 N	103° 30' 42.244 W
17,800.0	90.00	179.81	12,096.0	-5,745.9	-14.2	11,768,383.77	2,099,569.98	32° 24' 40.989 N	103° 30' 42.240 W
17,900.0	90.00	179.81	12,096.0	-5,845.9	-13.8	11,768,283.78	2,099,571.71	32° 24' 39.999 N	103° 30' 42.236 W
18,000.0	90.00	179.81	12,096.0	-5,945.9	-13.5	11,768,183.80	2,099,573.44	32° 24' 39.009 N	103° 30' 42.232 W
18,100.0	90.00	179.81	12,096.0	-6,045.9	-13.2	11,768,083.81	2,099,575.18	32° 24' 38.020 N	103° 30' 42.228 W
18,200.0	90.00	179.81	12,096.0	-6,145.9	-12.8	11,767,983.83	2,099,576.91	32° 24' 37.030 N	103° 30' 42.224 W
18,300.0	90.00	179.81	12,096.0	-6,245.9	-12.5	11,767,883.85	2,099,578.64	32° 24' 36.040 N	103° 30' 42.220 W
18,400.0	90.00	179.81	12,096.0	-6,345.9	-12.2	11,767,783.86	2,099,580.37	32° 24' 35.051 N	103° 30' 42.216 W
18,500.0	90.00	179.81	12,096.0	-6,445.9	-11.8	11,767,683.88	2,099,582.10	32° 24' 34.061 N	103° 30' 42.212 W
18,600.0	90.00	179.81	12,096.0	-6,545.9	-11.5	11,767,583.89	2,099,583.84	32° 24' 33.072 N	103° 30' 42.208 W
18,700.0	90.00	179.81	12,096.0	-6,645.9	-11.1	11,767,483.91	2,099,585.57	32° 24' 32.082 N	103° 30' 42.204 W
18,800.0	90.00	179.81	12,096.0	-6,745.9	-10.8	11,767,383.92	2,099,587.30	32° 24' 31.092 N	103° 30' 42.200 W
18,900.0	90.00	179.81	12,096.0	-6,845.9	-10.5	11,767,283.94	2,099,589.03	32° 24' 30.103 N	103° 30' 42.196 W
19,000.0	90.00	179.81	12,096.0	-6,945.9	-10.1	11,767,183.95	2,099,590.76	32° 24' 29.113 N	103° 30' 42.192 W
19,100.0	90.00	179.81	12,096.0	-7,045.9	-9.8	11,767,083.97	2,099,592.49	32° 24' 28.123 N	103° 30' 42.188 W
19,200.0	90.00	179.81	12,096.0	-7,145.9	-9.4	11,766,983.98	2,099,594.23	32° 24' 27.134 N	103° 30' 42.184 W
19,300.0	90.00	179.81	12,096.0	-7,245.9	-9.1	11,766,884.00	2,099,595.96	32° 24' 26.144 N	103° 30' 42.181 W
19,400.0	90.00	179.81	12,096.0	-7,345.9	-8.8	11,766,784.01	2,099,597.69	32° 24' 25.154 N	103° 30' 42.177 W
19,500.0	90.00	179.81	12,096.0	-7,445.9	-8.4	11,766,684.03	2,099,599.42	32° 24' 24.165 N	103° 30' 42.173 W
19,600.0	90.00	179.81	12,096.0	-7,545.9	-8.1	11,766,584.04	2,099,601.15	32° 24' 23.175 N	103° 30' 42.169 W
19,700.0	90.00	179.81	12,096.0	-7,645.9	-7.8	11,766,484.06	2,099,602.89	32° 24' 22.186 N	103° 30' 42.165 W
19,800.0	90.00	179.81	12,096.0	-7,745.9	-7.4	11,766,384.07	2,099,604.62	32° 24' 21.196 N	103° 30' 42.161 W
19,900.0	90.00	179.81	12,096.0	-7,845.9	-7.1	11,766,284.09	2,099,606.35	32° 24' 20.206 N	103° 30' 42.157 W
20,000.0	90.00	179.81	12,096.0	-7,945.9	-6.7	11,766,184.10	2,099,608.08	32° 24' 19.217 N	103° 30' 42.153 W
20,100.0	90.00	179.81	12,096.0	-8,045.9	-6.4	11,766,084.12	2,099,609.81	32° 24' 18.227 N	103° 30' 42.149 W
20,200.0	90.00	179.81	12,096.0	-8,145.9	-6.1	11,765,984.13	2,099,611.54	32° 24' 17.237 N	103° 30' 42.145 W
20,300.0	90.00	179.81	12,096.0	-8,245.9	-5.7	11,765,884.15	2,099,613.28	32° 24' 16.248 N	103° 30' 42.141 W
20,400.0	90.00	179.81	12,096.0	-8,345.9	-5.4	11,765,784.16	2,099,615.01	32° 24' 15.258 N	103° 30' 42.137 W
20,500.0	90.00	179.81	12,096.0	-8,445.9	-5.0	11,765,684.18	2,099,616.74	32° 24' 14.268 N	103° 30' 42.133 W
20,600.0	90.00	179.81	12,096.0	-8,545.9	-4.7	11,765,584.19	2,099,618.47	32° 24' 13.279 N	103° 30' 42.129 W
20,700.0	90.00	179.81	12,096.0	-8,645.9	-4.4	11,765,484.21	2,099,620.20	32° 24' 12.289 N	103° 30' 42.125 W
20,800.0	90.00	179.81	12,096.0	-8,745.9	-4.0	11,765,384.22	2,099,621.94	32° 24' 11.299 N	103° 30' 42.121 W
20,900.0	90.00	179.81	12,096.0	-8,845.8	-3.7	11,765,284.24	2,099,623.67	32° 24' 10.310 N	103° 30' 42.117 W
21,000.0	90.00	179.81	12,096.0	-8,945.8	-3.4	11,765,184.26	2,099,625.40	32° 24' 9.320 N	103° 30' 42.113 W

Centennial Resource Dev

Planning Report - Geographic

Database:	Compass	**Local Co-ordinate Reference:**	Well CRUNCH BERRY 6 FEDERAL COM 702H
Company:	NEW MEXICO	**TVD Reference:**	RKB=3632.5+25 @ 3657.5usft
Project:	LEA	**MD Reference:**	RKB=3632.5+25 @ 3657.5usft
Site:	CRUNCH BERRY	**North Reference:**	True
Well:	CRUNCH BERRY 6 FEDERAL COM 702H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	CRUNCH BERRY 6 FEDERAL COM 702H		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
21,100.0	90.00	179.81	12,096.0	-9,045.8	-3.0	11,765,084.27	2,099,627.13	32° 24' 8.331 N	103° 30' 42.109 W
21,200.0	90.00	179.81	12,096.0	-9,145.8	-2.7	11,764,984.29	2,099,628.86	32° 24' 7.341 N	103° 30' 42.105 W
21,300.0	90.00	179.81	12,096.0	-9,245.8	-2.3	11,764,884.30	2,099,630.59	32° 24' 6.351 N	103° 30' 42.101 W
21,400.0	90.00	179.81	12,096.0	-9,345.8	-2.0	11,764,784.32	2,099,632.33	32° 24' 5.362 N	103° 30' 42.097 W
21,500.0	90.00	179.81	12,096.0	-9,445.8	-1.7	11,764,684.33	2,099,634.06	32° 24' 4.372 N	103° 30' 42.093 W
21,600.0	90.00	179.81	12,096.0	-9,545.8	-1.3	11,764,584.35	2,099,635.79	32° 24' 3.382 N	103° 30' 42.089 W
21,700.0	90.00	179.81	12,096.0	-9,645.8	-1.0	11,764,484.36	2,099,637.52	32° 24' 2.393 N	103° 30' 42.085 W
21,800.0	90.00	179.81	12,096.0	-9,745.8	-0.6	11,764,384.38	2,099,639.25	32° 24' 1.403 N	103° 30' 42.081 W
21,900.0	90.00	179.81	12,096.0	-9,845.8	-0.3	11,764,284.39	2,099,640.99	32° 24' 0.413 N	103° 30' 42.077 W
22,000.0	90.00	179.81	12,096.0	-9,945.8	0.0	11,764,184.41	2,099,642.72	32° 23' 59.424 N	103° 30' 42.074 W
22,100.0	90.00	179.81	12,096.0	-10,045.8	0.4	11,764,084.42	2,099,644.45	32° 23' 58.434 N	103° 30' 42.070 W

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/BHL - CRUNCH BE	0.00	0.00	12,000.0	-10,164.7	0.9	11,763,965.61	2,099,646.68	32° 23' 57.258 N	103° 30' 42.063 W
- plan misses target center by 152.8usft at 22100.0usft MD (12096.0 TVD, -10045.8 N, 0.4 E)									
- Point									
FTP - CRUNCH BERRY	0.00	0.00	12,000.0	199.9	0.0	11,774,329.19	2,099,501.31	32° 25' 39.831 N	103° 30' 42.075 W
- plan misses target center by 172.4usft at 11916.8usft MD (11883.9 TVD, 72.6 N, -1.6 E)									
- Circle (radius 50.0)									

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.

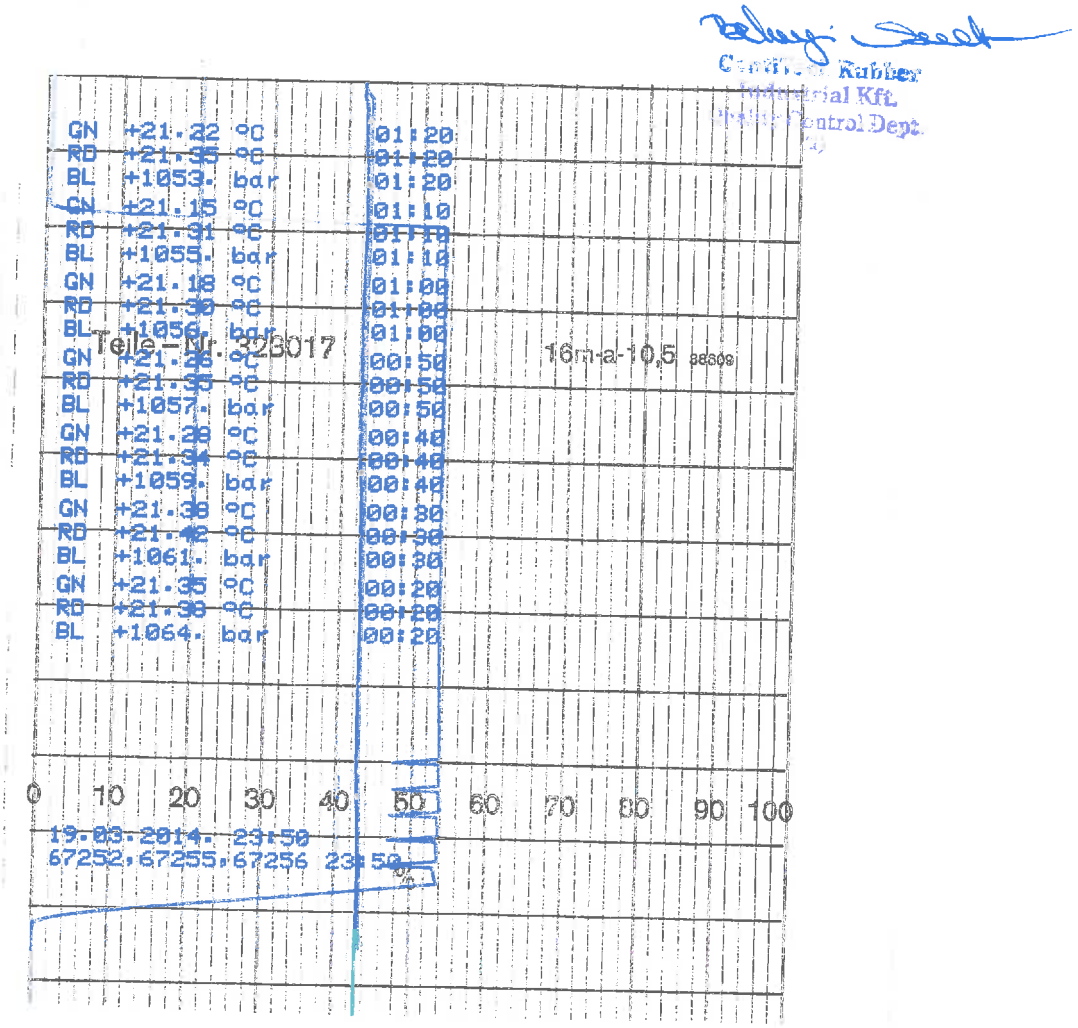
STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes 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. (1) [signatures]

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

Page: 1 / 1



Hose Data Sheet

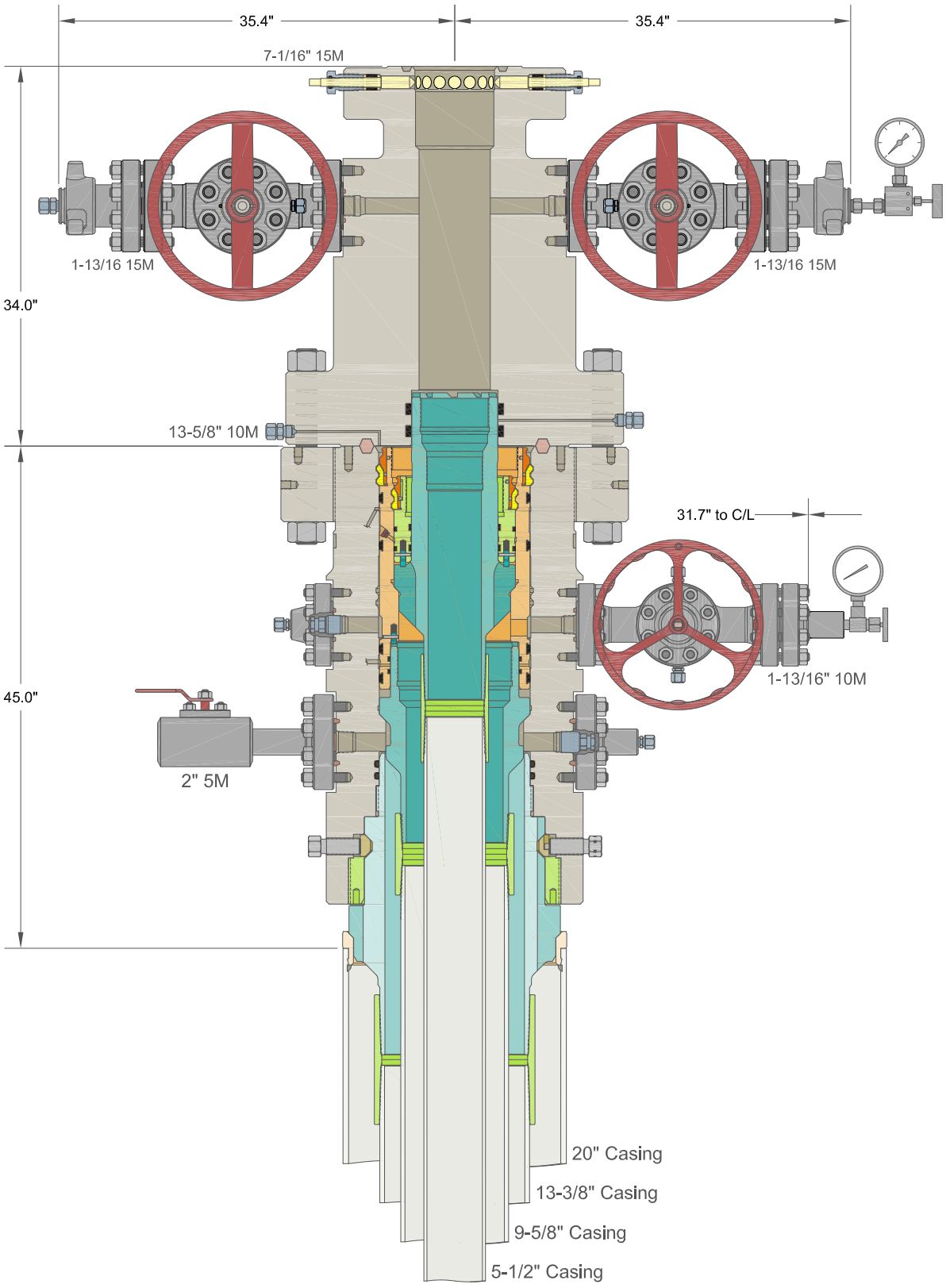
CRI Order No.	538236
Customer	ContiTech Oil & Marine Corp.
Customer Order No	4500409659
Item No.	1
Hose Type	Flexible Hose
Standard	**API SPEC 16 C**
Inside dia in inches	3
Length	35 ft
Type of coupling one end	FLANGE 4.1/16" 10K API SPEC 6A TYPE 6BX FLANGE C/W BX155 R.GR.SOUR
Type of coupling other 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

Woody 22 Fed Com 504H

Centennial Drilling Plan for 3-Casing String Bone Springs Formation

13-3/8" x 9-5/8" x 5-1/2" Casing Design

1. Drill 17-1/2" surface hole to Total Depth with Spudder Rig and perform wellbore cleanup cycles.
2. Run and land 13-3/8" casing to Depth.
3. Cement 13-3/8" casing – cement to surface.
4. Cut / Dress Conductor and 13-3/8" casing as needed, weld on Multi-bowl system with baseplate supported by 20" conductor.
5. Test Weld to 70% of 13-3/8" casing collapse. Place nightcap with Pressure Gauge on wellhead and test seals to 70% of Casing Collapse.
6. Bleed Pressure if necessary and remove nightcap. 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. Cement must have achieved 500psi compressive strength prior to test.
8. 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.
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 Casing with mandrel hanger in wellhead.
11. Cement 9-5/8 casing – cement to surface.
12. Washout stack then run wash tool in wellhead and wash hanger and pack-off setting area.
13. Install pack-off 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. Cement must have achieved 500psi compressive strength prior to test.
14. Install wear bushing then drill out 9-5/8" shoe-track 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 pack-off 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.



ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC		CENTENNIAL RESOURCE DEVELOPMENT LEE CO, NM	
20" x 13-3/8" x 9-5/8" x 5-1/2" 10M MBU-3T-CFL-R-DBLO System With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head, 20" Landing Ring & Pin Down Mandrel Casing Hangers	DRAWN	DLE	10JUN20
	APPRV		
	DRAWING NO.	HBE0000338	

AFMSS

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

PWD Data Report

05/12/2021

APD ID: 10400054206 **Submission Date:** 02/11/2020

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

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: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

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: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

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: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

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

05/12/2021

APD ID: 10400054206 **Submission Date:** 02/11/2020

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: CRUNCH BERRY 6 FEDERAL COM **Well Number:** 702H

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: NMB001841

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
30-025-49017	28432	Grama Ridge; Bone Spring, West
[4] Property Code	[5] Property Name	[6] Well Number
329976	CRUNCH BERRY 6 FEDERAL COM	702H
[7] OGRID No.	[8] Operator Name	[9] Elevation
372165	CENTENNIAL RESOURCE PRODUCTION, LLC	3632.5'

[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
3	6	22S	34E		300	NORTH	1805	WEST	LEA

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	7	22S	34E		100	SOUTH	1298	WEST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
630.28			

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.

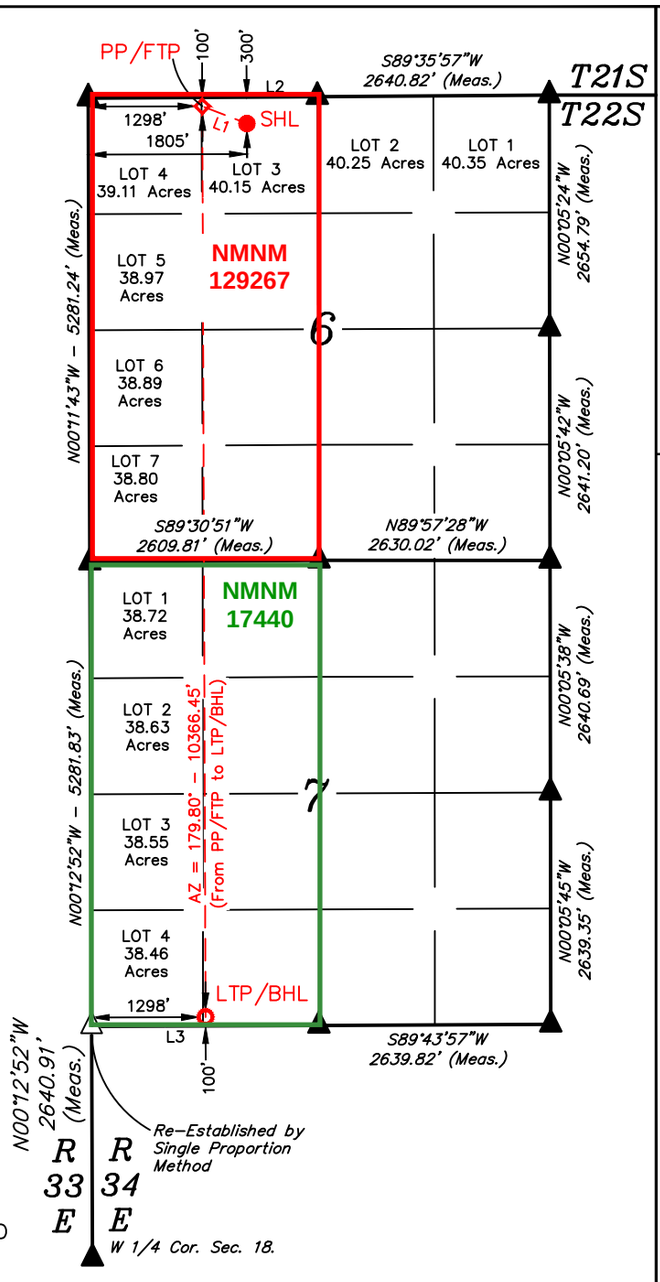
[16]

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°25'37.85" (32.427181°)
LONGITUDE = 103°30'42.07" (103.511687°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 520114.43' X: 794853.69'
UTM, NAD 83 (ZONE 13)
Y: 11774129.28' X: 2099504.12'

NAD 83 (PP/FTP)
LATITUDE = 32°25'39.82" (32.427727°)
LONGITUDE = 103°30'47.99" (103.513330°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 520309.04' X: 794345.23'
UTM, NAD 83 (ZONE 13)
Y: 11774320.69' X: 2098994.53'

NAD 83 (LTP/BHL)
LATITUDE = 32°23'57.26" (32.399238°)
LONGITUDE = 103°30'47.98" (103.513326°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 509944.61' X: 794425.95'
UTM, NAD 83 (ZONE 13)
Y: 11763958.43' X: 2099139.89'

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N68°48'51"W	544.52'
L2	S89°38'16"W	2608.50'
L3	S89°47'13"W	2588.94'



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

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" (NAD83)

2000' 1000' 0' 2000'
SCALE

DRAWN BY: T.A. 09-16-19
REV: 4 C.C. 04-01-21 (NAME CHANGE)

[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.

4/26/21
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.

August 09, 2019
Date of Survey

Signature and Seal of Professional Surveyor:

PAUL BUCHELE
NEW MEXICO
23782
04-01-21
PROFESSIONAL SURVEYOR

Certificate Number:

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
30-025-49017	28432	Grama Ridge; Bone Spring, West

[4] Property Code	[5] Property Name	[6] Well Number
	CRUNCH BERRY 6 FEDERAL COM	702H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372165	CENTENNIAL RESOURCE PRODUCTION, LLC	3632.5'

[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
3	6	22S	34E		300	NORTH	1805	WEST	LEA

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	7	22S	34E		100	SOUTH	1298	WEST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
630.28			

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.

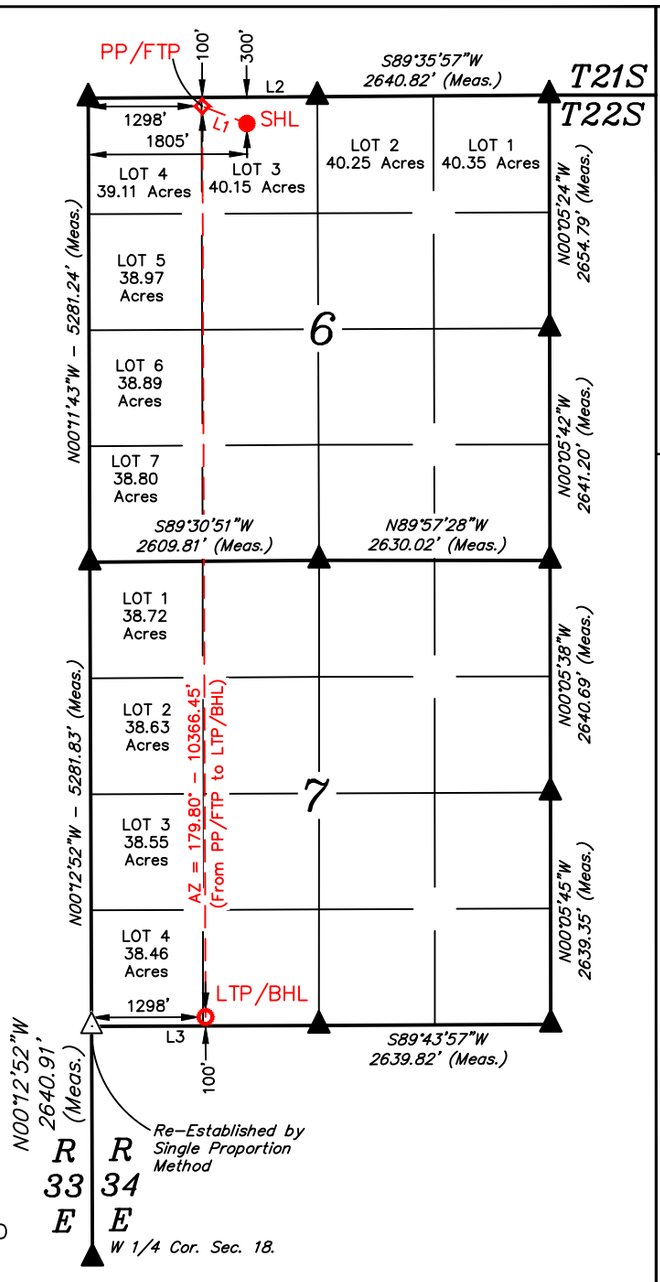
[16]

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°25'37.85" (32.427181°)
LONGITUDE = 103°30'42.07" (103.511687°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 520114.43' X: 794853.69'
UTM, NAD 83 (ZONE 13)
Y: 11774129.28' X: 2099504.12'

NAD 83 (PP/FTP)
LATITUDE = 32°25'39.82" (32.427727°)
LONGITUDE = 103°30'47.99" (103.513330°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 520309.04' X: 794345.23'
UTM, NAD 83 (ZONE 13)
Y: 11774320.69' X: 2098994.53'

NAD 83 (LTP/BHL)
LATITUDE = 32°23'57.26" (32.399238°)
LONGITUDE = 103°30'47.98" (103.513326°)
STATE PLANE NAD 83 (N.M. EAST)
Y: 509944.61' X: 794425.95'
UTM, NAD 83 (ZONE 13)
Y: 11763958.43' X: 2099139.89'

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N68°48'51"W	544.52'
L2	S89°38'16"W	2608.50'
L3	S89°47'13"W	2588.94'



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

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" (NAD83)

2000' 1000' 0' 2000'
SCALE

DRAWN BY: T.A. 09-16-19
REV: 4 C.C. 04-01-21 (NAME CHANGE)

[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.

4/26/21
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.

August 09, 2019
Date of Survey

Signature and Seal of Professional Surveyor:

PAUL BUCHELE
NEW MEXICO
23782
PROFESSIONAL SURVEYOR
04-01-21

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: 02/10/2020

☒ 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
Crunch Berry 6 Fed Com 602H	Pending	3-6-22S-34E	300 FNL & 1775 FWL	2000 MCF/D	Neither	New Well
Crunch Berry 6 Fed Com 603H	Pending	3-6-22S-34E	300 FNL & 1835 FWL	2000 MCF/D	Neither	New Well
Crunch Berry 6 Fed Com 702H	Pending **30-025-49017**	3-6-22S-34E	300 FNL & 1805 FWL	2550 MCR/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 15' 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 27935

CONDITIONS

Operator: CENTENNIAL RESOURCE PRODUCTION, LLC 1001 17th Street, Suite 1800 Denver, CO 80202	OGRID: 372165
	Action Number: 27935
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	6/14/2021
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	6/14/2021