

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NMNM0560397

6. If Indian, Allottee or Tribe Name

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

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

MACK ENERGY CORPORATION

Contact: JERRY SHERRELL
E-Mail: jerrys@mackenergycorp.com

8. Well Name and No.

CRANBROOK FEDERAL COM 1H
related well name

9. AP Well No.

30-005-64318

3a. Address

P.O. BOX 960
ARTESIA, NM 88211-0960

3b. Phone No. (include area code)

Ph: 505.748.1288
Fx: 505.746.9539

10. Field and Pool or Exploratory Area

ROUND TANK-SAN ANDRES

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 36 T15S R28E NWNE 1020FNL 2450FEL
32.976929 N Lat, 104.084656 W Lon

11. County or Parish, State

CHAVES COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment Notice

☐ Acidize

☐ Alter Casing

☐ Casing Repair

☐ Change Plans

☐ Convert to Injection

☐ Deepen

☐ Hydraulic Fracturing

☐ New Construction

☐ Plug and Abandon

☐ Plug Back

☐ Production (Start/Resume)

☐ Reclamation

☐ Recomplete

☐ Temporarily Abandon

☐ Water Disposal

☐ Water Shut-Off

☐ Well Integrity

☒ Other
Change to Original A
PD

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Mack Energy Corporation would like to change the name of this well from Cranbrook State Com 1H to
Cranbrook Federal Com 1H.

New C-102 and casing and cement information is attached.

327/70

RECEIVED

FEB 19 2020

EMNRD-OCD ARTESIA

All previous conditions of Approval still apply. DR

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #502073 verified by the BLM Well Information System
For MACK ENERGY CORPORATION, sent to the Roswell
Committed to AFMSS for processing by MEIGHAN SALAS on 02/05/2020 (20MMS0047SE)

Name (Printed/Typed) JERRY SHERRELL

Title PRODUCTION CLERK

Signature (Electronic Submission)

Date 02/05/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Title

Date

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

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.

(Instructions on page 2)

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

KNP - 2-20-2020

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
 1230 S. St. Francis Dr., Santa Fe, NM 87505
 Phone (505) 476-3460 Fax (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-005-64318	² Pool Code 52770	³ Pool Name Round Tank: San Andres
⁴ Property Code 322478 327170	⁵ Property Name CRANBROOK FEDERAL COM	⁶ Well Number 1H
⁷ OGRID No. 13837	⁸ Operator Name MACK ENERGY CORPORATION	⁹ Elevation 3597.9

" Surface Location									
U/L or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	36	15 S	28 E		1020	NORTH	2450	EAST	CHAVES

" Bottom Hole Location if Different From Surface									
U/L or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	24	15 S	28 E		2625	SOUTH	2310	EAST	CHAVES

¹² Dedicated Acres 240	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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.

" OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <i>Jerry W. Sherrell</i> Date: 1/29/2020 Printed Name: Jerry W. Sherrell E-mail Address: jerryse@mec.com		" SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. JANUARY 28, 2020 Date of Survey Signature and Seal of Registered Surveyor: <i>[Signature]</i> Certificate Number: 12797	
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RWP 2-20-2020

Intent ☐ As Drilled ☐

API #

Operator Name:

MACK ENERGY CORPORATION

Property Name:

CRANBROOK FEDERAL COM

Well Number

1H

Kick Off Point (KOP)

UL B	Section 36	Township 15S	Range 28E	Lot	Feet 1020	From N/S NORTH	Feet 2450	From E/W EAST	County CHAVES
Latitude 32.9769293					Longitude 104.0846580			NAD 83	

First Take Point (FTP)

UL O	Section 25	Township 15S	Range 28E	Lot	Feet 100	From N/S SOUTH	Feet 2310	From E/W EAST	County CHAVES
Latitude 32.9800069					Longitude 104.0842237			NAD 83	

Last Take Point (LTP)

UL J	Section 24	Township 15S	Range 28E	Lot	Feet 2535	From N/S SOUTH	Feet 2310	From E/W EAST	County CHAVES
Latitude 33.0011434					Longitude 104.0842170			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit?

☐

Is this well an infill well?

☐

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

API #

Operator Name:

Property Name:

Well Number

KZ 06/29/2018

Cranbrook Federal Com #1H

Surface- 17 1/2" bit 200' 13 3/8"
48# J-55

Stage 1	Slurry	Density	Yield	Mix H2O Gals./sk	# of Sacks	% Excess	Slurry Top
Lead	RFC + 12% PF53+2%PF1+5ppsPF42+ .125ppsPF29	14.4	1.61	7.357	250		
Tail	Class C+1%PF1	14.8	1.34	6.323	200	100	

Comments	20bbls Gelled Water. 50 sacks of 11# Scavenger cement.	Cu. Ft per Lin. Ft 347
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Intermediate- 12 1/4" bit
1,200' 9 5/8"-36# J-55

Stage 1	Slurry	Density	Yield	Mix H2O Gals./sk	# of Sacks	% Excess	Slurry Top
Lead							
Tail	Class C+1%PF1	14.8	1.34	6.323	565	100	Surface

Comments	20 bbls Gelled Water. 50 sacks of 11# Scavenger cement.	Cu. Ft per Lin. Ft 469.8
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Production- 8 3/4" bit 11,547' 7"
26# HCP-110. 3,100' Crossover
7"X 5 1/2". 5 1/2"-17# HCP-110'
8,447'

Stage 1	Slurry	Density	Yield	Mix H2O Gals./sk	# of Sacks	% Excess	Slurry Top
Lead	Class "C" 4% PF20+4 pps PF45+125pps PF29	13.2	1.84	9.914	360	40	Surface
Tail	PVL+1.3 (BWOW) PF44+5%PF174+.5%PF606+.1%P F153+.4ppsPF44	13	1.48	7.577	2200	40	2,000'

[illegible]

Stage 2	Slurry	Density	Yield	# of sacks	% Excess	Slurry Top
Lead						
Tail						

Comments:	
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All production cement figured with an additional 10% for washout unless otherwise noted. Flush is figured with a 40' shoe joint. Do not displace more than 2bbls over calculated flush without prior approval.

Casing Design Well: Crabbrook Federal Com #1H

String Size & Function: 13 3/8 in surface x intermediate

Total Depth: 200 ft

Pressure Gradient for Calculations (While drilling)

Mud weight, collapse: 9.6 #/gal Safety Factor Collapse: 1.125

Mud weight, burst: 9.6 #/gal Safety Factor Burst: 1.25

Mud weight for joint strength: 9.6 #/gal Safety Factor Joint Strength: 1.8

BHP @ TD for: collapse: 99.84 psi Burst: 99.84 psi joint strength: 99.84 psi

Partially evacuated hole? Pressure gradient remaining: 10 #/gal

Max. Shut in surface pressure: 500 psi

1st segment	200 ft	to	0 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
13.375 inches	48 #/ft	J-55	ST&C	3,220	2,420	4,030	200
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
740 psi	2,370 psi	433,000 #	744,000 #	12,559			

2nd segment	0 ft	to	0 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						0
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
psi	psi	,000 #	,000 #				

3rd segment	0 ft	to	0 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						0
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
psi	psi	,000 #	,000 #				

4th segment	0 ft	to	0 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						0
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
psi	psi	,000 #	,000 #				

5th segment	0 ft	to	0 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						0
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
psi	psi	,000 #	,000 #				

6th segment	0 ft	to	0 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						0
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
psi	psi	,000 #	,000 #				

Select	1st segment bottom	200	S.F.	Actual	Desire
			collapse	7.411859	>= 1.125
			burst-b	4.700889	>= 1.25
			burst-t	4.74	
	200 ft to 0 ft				
	13.375 0 J-55 ST&C				
	Top of segment 1 (ft)	0	S.F.	Actual	Desire
Select	2nd segment from bottom		collapse	#DIV/0!	>= 1.125
			burst-b	0	>= 1.25
			burst-t	0	
	0 ft to 0 ft		joint strength	52.86966	>= 1.8
	0 0 0 0				

Casing Design Well: Cranbrook Federal Conn #1H

String Size & Function: 9 5/8 in surface intermediate

Total Depth: 1200 ft TVD: 1200 ft

Pressure Gradient for Calculations (While drilling)

Mud weight, collapse: 10 #/gal Safety Factor Collapse: 1.125

Mud weight, burst: 10 #/gal Safety Factor Burst: 1.25

Mud weight for joint strength: 10 #/gal Safety Factor Joint Strength: 1.8

BHP @ TD for: collapse: 624 psi Burst: 624 psi joint strength: 624 psi

Partially evacuated hole? Pressure gradient remaining: 10 #/gal

Max. Shut In surface pressure: 500 psi

1st segment	1200 ft	to	0 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
9.625 inches	38 #/ft	J-55	ST&C	3,940	2,960	4,930	1200
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
2,020 psi	3,520 psi	394,000 #	564,000 #	8.765			

2nd segment	ft	to	ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						0
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
psi	psi	,000 #	,000 #				

3rd segment	0 ft	to	0 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						0
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
psi	psi	,000 #	,000 #				

4th segment	0 ft	to	0 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						0
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
psi	psi	,000 #	,000 #				

5th segment	0 ft	to	0 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						0
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
psi	psi	,000 #	,000 #				

6th segment	0 ft	to	0 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						0
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
psi	psi	,000 #	,000 #				

Select	1st segment bottom	1200	S.F.	Actual	Desire
			collapse	3.237179	>= 1.125
			burst-b	7.04	>= 1.25
			burst-t	7.04	
	1200 ft to 0 ft				
	9.625 0 J-55 ST&C				
	Top of segment 1 (ft)	0	S.F.	Actual	Desire
Select	2nd segment from bottom		collapse	#DIV/0!	>= 1.125
			burst-b	0	>= 1.25
			burst-t	0	
	0 ft to 0 ft		int strength	10.76785	>= 1.8
	0 0 0 0				

Casing Design Well: Cranbrook Federal Com #1H

String Size & Function: 7 x 5.5 In Production X

Total Depth: 11547 ft TVD: 2953 ft

Pressure Gradient for Calculations (While drilling)

Mud weight, collapse: 10 #/gal Safety Factor Collapse: 1.125

Mud weight, burst: 10 #/gal Safety Factor Burst: 1.25

Mud weight for joint strength: 10 #/gal Safety Factor Joint Strength: 1.8

BHP @ TD for: collapse: 1535.56 psi Burst: 1535.56 psi joint strength: 1535.56 psi

Partially evacuated hole? Pressure gradient remaining: 10 #/gal

Max. Shut in surface pressure: 3000 psi

1st segment		11547 ft to	3100 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
5.5 inches	17 #/ft	HCP-110	Buttress	4,620	3,470	5,780	8447
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
8,580 psi	10,640 psi-lrcr	568,000 #	546,000 #	4,767			

2nd segment		2100 ft to	3100 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	26 #/ft	HCP-110	Buttress	6,930	5,200	8,660	1200
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
7,800 psi	9,950 psi-lrcr	853,000 #	830,000 #	6,151			

3rd segment		2100 ft to	0 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	26 #/ft	HCP-110	LT&C	6,930	3,200	8,660	2100
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
7,800 psi	9,950 psi	893,000 #	830,000 #	6,151			

4th segment		0 ft to	0 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						0
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
psi	psi	,000 #	,000 #				

5th segment		0 ft to	0 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						0
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
psi	psi	,000 #	,000 #				

6th segment		0 ft to	0 ft	Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						0
Collapse Resistance	Internal Yield	Joint Strength	Body Yield	Drift			
psi	psi	,000 #	,000 #				

Select	1st segment bottom	8930	S.F.	Actual	Desire
			collapse	5 587538	>= 1.125
	11547 ft to 3300 ft		burst-b	3 546667	>= 1.25
	5.5 0 HCP-110 Buttress		burst-l	3 546667	
	Top of segment 1 (ft)	3300	S.F.	Actual	Desire
Select	2nd segment from bottom		collapse	4 332786	>= 1.125
			burst-b	3 316667	>= 1.25
	3300 ft to 2100 ft		burst-l	3 316667	
	7 26 HCP-110 Buttress		joint strength	4 783216	>= 1.8