

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

Form C-101
August 1, 2011

Permit 314212

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address MACK ENERGY CORP P.O. Box 960 Artesia, NM 882110960		2. OGRID Number 13837
		3. API Number 30-005-64366
4. Property Code 318348	5. Property Name KLONDIKE STATE COM	6. Well No. 002H

7. Surface Location

UL - Lot O	Section 23	Township 15S	Range 28E	Lot Idn	Feet From 710	N/S Line S	Feet From 1650	E/W Line E	County Chaves
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8. Proposed Bottom Hole Location

UL - Lot B	Section 35	Township 15S	Range 28E	Lot Idn B	Feet From 760	N/S Line N	Feet From 1650	E/W Line E	County Chaves
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9. Pool Information

ROUND TANK;SAN ANDRES	52770
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3575
16. Multiple N	17. Proposed Depth 9330	18. Formation San Andres	19. Contractor	20. Spud Date 9/1/2022
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	48	200	300	0
Int1	12.25	9.625	36	1200	560	0
Prod	8.75	7	26	3100	370	0
Prod	8.75	5.5	17	9330	1690	0

Casing/Cement Program: Additional Comments

Mack Energy proposes to drill a 17 1/2" hole to 200' run 13 3/8" csg & cmt. Drill 12 1/4" hole to 1200' run 9 5/8" csg & cmt. Drill 8 3/4" hole to 9330' run 7" & 5 1/2" csg & cmt. Put well on production.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000	3000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.

Signature:

Printed Name: Electronically filed by Jerry Sherrell

Title: Regulatory Supervisor

Email Address: jerrys@mec.com

Date: 4/19/2022

Phone: 575-748-1288

OIL CONSERVATION DIVISION

Approved By: Katherine Pickford

Title: Geoscientist

Approved Date: 8/23/2022

Expiration Date: 8/23/2024

Conditions of Approval Attached

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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 30-005-64366		² Pool Code 52770		³ Pool Name Round Tank; San Andres	
⁴ Property Code 318348		⁵ Property Name KLONDIKE STATE COM			⁶ Well Number 2H
⁷ OGRID No. 13837		⁸ Operator Name MACK ENERGY CORPORATION			⁹ Elevation 3575.0

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	23	15 S	28 E		710	SOUTH	1650	EAST	CHAVES

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
B	35	15 S	28 E		760	NORTH	1650	EAST	CHAVES

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
200			

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.

		¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Deana Weaver</i> 4/19/2022 Signature _____ Date _____ Deana Weaver Printed Name _____ dweaver@mec.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. APRIL 1, 2022 Date of Survey _____ <i>[Signature]</i> Signature and Seal of Professional Surveyor: _____ Certificate Number: 12797 PROFESSIONAL SURVEYOR NO. 9378		¹⁹ 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. APRIL 1, 2022 Date of Survey _____ <i>[Signature]</i> Signature and Seal of Professional Surveyor: _____ Certificate Number: 12797 PROFESSIONAL SURVEYOR NO. 9378

Intent ☒ ☒ As Drilled ☐

API #		
Operator Name: MACK ENERGY CORPORATION	Property Name: KLONDIKE STATE COM	Well Number 2H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
B	26	15S	28E		100	NORTH	1650	EAST	CHAVES
Latitude 32.9939804					Longitude 104.0992625				NAD 83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
B	35	15S	28E		660	NORTH	1650	EAST	CHAVES
Latitude 32.9778913					Longitude 104.0992130				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

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Energy, Minerals and Natural Resources
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1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Conditions

Permit 314212

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: MACK ENERGY CORP [13837] P.O. Box 960 Artesia, NM 882110960	API Number: 30-005-64366
	Well: KLONDIKE STATE COM #002H

OCD Reviewer	Condition
kpickford	Notify OCD 24 hours prior to casing & cement
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104
kpickford	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
kpickford	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
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system

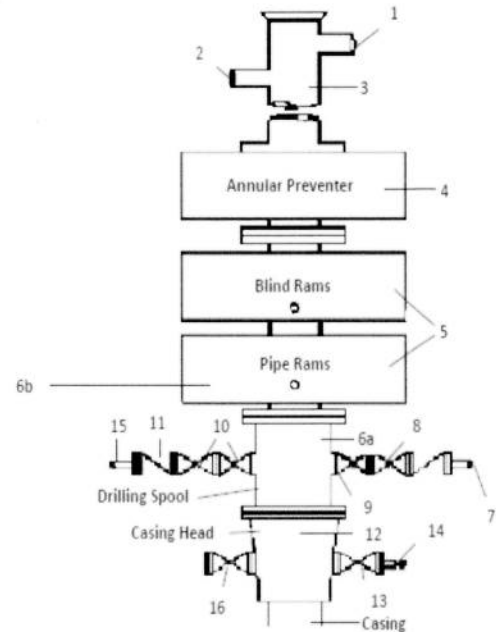
Mack Energy Corporation

Minimum Blowout Preventer Requirements

5000 psi Working Pressure
13 5/8 inch- 5 MWP
11 Inch - 5 MWP

Stack Requirements

NO.	Items	Min. I.D.	Min. Nominal
1	Flowline		2"
2	Fill up line		2"
3	Drilling nipple		
4	Annular preventer		
5	Two single or one dual hydraulically operated rams		
6a	Drilling spool with 2" min. kill line and 3" min choke line outlets		2" Choke
6b	2" min. kill line and 3" min. choke line outlets in ram. (Alternate to 6a above)		
7	Valve Gate Plug	3 1/8	
8	Gate valve-power operated	3 1/8	
9	Line to choke manifold		3"
10	Valve Gate Plug	2 1/16	
11	Check valve	2 1/16	
12	Casing head		
13	Valve Gate Plug	1 13/16	
14	Pressure gauge with needle valve		
15	Kill line to rig mud pump manifold		2"



OPTIONAL

16	Flanged Valve	1 13/16	
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CONTRACTOR'S OPTION TO FURNISH:

- All equipment and connections above bradenhead or casinghead. Working pressure of preventers to be 2000 psi minimum.
- Automatic accumulator (80 gallons, minimum) capable of closing BOP in 30 seconds or less and, holding them closed against full rated working pressure.
- BOP controls, to be located near drillers' position.
- Kelly equipped with Kelly cock.
- Inside blowout preventer or its equivalent on derrick floor at all times with proper threads to fit pipe being used.
- Kelly saver-sub equipped with rubber casing protector at all times.
- Plug type blowout preventer tester.
- Extra set pipe rams to fit drill pipe in use on location at all times.
- Type RX ring gaskets in place of Type R.

MEC TO FURNISH:

- Bradenhead or casing head and side valves.
- Wear bushing. If required.

GENERAL NOTES:

- Deviations from this drawing may be made only with the express permission of MEC's Drilling Manager.
- All connections, valves, fittings, piping, etc., subject to well or pump pressure must be flanged (suitable clamp connections acceptable) and have minimum working pressure equal to rated working pressure of preventers up through choke valves must be full opening and suitable for high pressure mud service.
- Controls to be of standard design and each marked, showing opening and closing position
- Chokes will be positioned so as not to hamper or delay changing of choke beans.

Replaceable parts for adjustable choke, or bean sizes, retainers, and choke wrenches to be conveniently located for immediate use.

- All valves to be equipped with hand-wheels or handles ready for immediate use.
- Choke lines must be suitably anchored.
- Handwheels and extensions to be connected and ready for use.
- Valves adjacent to drilling spool to be kept open. Use outside valves except for emergency.
- All seamless steel control piping (2000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
- Casinghead connections shall not be used except in case of emergency.
- Does not use kill line for routine fill up operations.

Intent ☒ ☒ As Drilled ☐

API #		
Operator Name: MACK ENERGY CORPORATION	Property Name: KLONDIKE STATE COM	Well Number 2H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
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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

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description Effective May 25, 2021

I. Operator: Mack Energy Corporation **OGRID:** 013837 **Date:** 4 / 19 / 2022

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Klondike State Com #2H		O Sec 23 T15S R28E	710 FSL 1650 FEL	100	100	1,000

IV. Central Delivery Point Name: DCP Midstream Linam Ranch Processing Plant / Durango Midstream [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Klondike State Com #2H		9/1/2022	9/20/2022	11/31/2022	11/31/2022	12/1/2022

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan**EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	<i>Deana Weaver</i>
Printed Name:	Deana Weaver
Title:	Regulatory Technician II
E-mail Address:	dweaver@mec.com
Date:	4/19/2022
Phone:	575-748-1288
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)	
Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

VI. Separation Equipment:

Mack Energy Corporation(MEC) production facilities include separation equipment designed to efficiently separate gas from liquid phases to optimize gas capture based on projected and estimated volumes from the targeted pool of our completion project. MEC will utilize flowback separation equipment and production separation equipment designed and built to industry specifications after the completion to optimize gas capture and send gas to sales or flare based on analytical composition. MEC operates facilities that are typically multi-well facilities. Production separation equipment is upgraded prior to new wells being completed, if determined to be undersized or inadequate. This equipment is already on-site and tied into our sales gas lines prior to the new drill operations.

VII. Operational Practices:

1. Subsection (A) Venting and Flaring of Natural Gas. MEC understands the requirements of NMAC 19.15.27.8 which outlines that the venting and flaring of natural gas during drilling, completion or production operations that constitutes waste as defined in 19.15.2 are prohibited.
2. Subsection (B) Venting and Flaring during drilling operations. This gas capture plan isn't for a well being drilled.
3. Subsection (C) Venting and flaring during completion or recompletion. Flowlines will be routed for flowback fluids into a completion or storage tank and if feasible under well conditions, flare rather than vent and commence operation of a separator as soon as it is technically feasible for a separator to function.
 - At any point in the well life (completion, production, inactive) an audio, visual and olfactory inspection be performed at prescribed intervals (weekly or monthly) pursuant to Subsection D of 19.15.27.8 NMAC, to confirm that all production equipment is operating properly and there are no leaks or releases.
4. Subsection (D) Venting and flaring during production operations
 - At any point in the well life (completion, production, inactive) an audio, visual and olfactory inspection be performed at prescribed intervals (weekly or monthly) pursuant to Subsection D of 19.15.27.8 NMAC, to confirm that all production equipment is operating properly and there are no leaks or releases.
 - Monitor manual liquid unloading for wells on-site or in close proximity (<30 minutes' drive time), take reasonable actions to achieve a stabilized rate and pressure at the earliest practical time, and take reasonable actions to minimize venting to the maximum extent practicable.
 - MEC will not vent or flare except during the approved activities listed in NMAC 19.15.27.8 (D) 14.
5. Subsection (E) Performance standards
 - All tanks and separation equipment are designed for maximum throughput and pressure to minimize waste.
 - If a flare is utilized during production operations it will have a continuous pilot and is located more than 100 feet from any known well or storage tanks.
 - At any point in the well life (completion, production, inactive) an audio, visual and olfactory inspection be performed at prescribed intervals (weekly or monthly) pursuant to Subsection D of 19.15.27.8 NMAC, to confirm that all production equipment is operating properly and there are no leaks or releases.

6. Subsection (F) Measurement or estimation of vented and flared natural gas
 - Measurement equipment is installed to measure the volume of natural gas flared from process piping.
 - When measurement isn't practicable, estimation of vented and flared natural gas will be completed as noted in 19.15.27.8 (F) 5-6.

VIII. Best Management Practices:

1. MEC has adequate storage and takeaway capacity for wells it chooses to complete as the flowlines at the sites are already in place and tied into a gathering system.
2. MEC will flare rather than vent vessel blowdown gas when technically feasible during active and/or planned maintenance to equipment on-site.
3. MEC combusts natural gas that would otherwise be vented or flared, when technically feasible.
4. MEC will shut in wells in the event of a takeaway disruption, emergency situation, or other operations where venting or flaring may occur due to equipment failures.
5. MEC has a gas gathering system in place(CTB-887)a with multiple purchaser's to limit venting or flaring, due to purchaser shut downs.

Klondike State Com 2H, Plan 1

Operator	Mack Energy Corp			Units	feet, °/100ft		15:54 Wednesday, April 13, 2022 Page 1 of 5				
Field	Round Tank			County	Chaves		Vertical Section Azimuth 179.72				
Well Name	Klondike State Com 2H			State	New Mexico		Survey Calculation Method Minimum Curvature				
Plan	1			Country	USA		Database Access				
Location		SL: 710 FSL & 1650 FEL Section 23-T15S-R28E BHL: 760 FNL & 1650 FEL Section 35-T15S-R28E				Map Zone		UTM		Lat Long Ref	
Site						Surface X		1916657		Surface Long	
Slot Name						Surface Y		11978398.4		Surface Lat	
Well Number		2H		UWI API		Surface Z		3593		Global Z Ref KB	
Project				MD/TVD Ref KB		Ground Level		3575		Local North Ref Grid	
DIRECTIONAL WELL PLAN											
MD*		INC*		AZI*		TVD*		N*		E*	
ft		deg		deg		ft		ft		°/100ft	
*** TIE (at MD = 2056.00)											
2056.00		0.00		0.0		2056.00		0.00		0.00	
2100.00		0.00		0.0		2100.00		0.00		0.00	
2150.00		0.00		0.0		2150.00		0.00		0.00	
*** KOP 8 DEGREES (at MD = 2156.00)											
2156.00		0.00		0.0		2156.00		0.00		0.00	
2200.00		3.52		179.7		2199.97		-1.35		0.01	
2250.00		7.52		179.7		2249.73		-6.16		0.03	
2300.00		11.52		179.7		2299.03		-14.43		0.07	
2350.00		15.52		179.7		2347.64		-26.11		0.13	
2400.00		19.52		179.7		2395.31		-41.16		0.20	
2450.00		23.52		179.7		2441.81		-59.50		0.29	
2500.00		27.52		179.7		2486.92		-81.04		0.40	
2550.00		31.52		179.7		2530.43		-105.67		0.52	
2600.00		35.52		179.7		2572.10		-133.27		0.65	
2650.00		39.52		179.7		2611.75		-163.72		0.80	
2700.00		43.52		179.7		2649.18		-196.86		0.96	
2750.00		47.52		179.7		2684.20		-232.52		1.14	
2800.00		51.52		179.7		2716.66		-270.55		1.32	
*** 55 DEGREE TAN (at MD = 2843.50)											
2843.50		55.00		179.7		2742.67		-305.40		1.49	
2850.00		55.00		179.7		2746.40		-310.72		1.52	
2900.00		55.00		179.7		2775.08		-351.68		1.72	
2950.00		55.00		179.7		2803.76		-392.64		1.92	
3000.00		55.00		179.7		2832.44		-433.60		2.12	
*** 10 DEGREE BUILD (at MD = 3043.50)											
3043.50		55.00		179.7		2857.39		-469.23		2.29	
3050.00		55.65		179.7		2861.09		-474.57		2.32	
3100.00		60.65		179.7		2887.46		-517.03		2.53	
3150.00		65.65		179.7		2910.04		-561.63		2.74	
3200.00		70.65		179.7		2928.64		-608.02		2.97	
3250.00		75.65		179.7		2943.13		-655.86		3.21	
3300.00		80.65		179.7		2953.40		-704.77		3.44	
3350.00		85.65		179.7		2959.36		-754.40		3.69	
*** LANDING POINT (at MD = 3388.50)											
3388.50		89.50		179.7		2960.99		-792.86		3.87	
3400.00		89.50		179.7		2961.09		-804.36		3.93	
3450.00		89.50		179.7		2961.52		-854.36		4.18	
3500.00		89.50		179.7		2961.96		-904.35		4.42	

Klondike State Com 2H, Plan 1

Operator	Mack Energy Corp	Units	feet, °/100ft	15:54 Wednesday, April 13, 2022	Page 2 of 5
Field	Round Tank	County	Chaves	Vertical Section Azimuth	179.72
Well Name	Klondike State Com 2H	State	New Mexico	Survey Calculation Method	Minimum Curvature
Plan	1	Country	USA	Database	Access
Location	SL: 710 FSL & 1650 FEL Section 23-T15S-R28E BHL: 760 FNL & 1650 FEL Section 35-T15S-R28E			Map Zone	UTM
Site				Surface X	1916657
Slot Name				Surface Y	11978398.4
Well Number	2H	UWI		Surface Z	3593
Project		API		Ground Level	3575
		MD/TVD Ref	KB		
				Local North Ref	Grid

DIRECTIONAL WELL PLAN

MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN*	SysTVD*
ft	deg	deg	ft	ft	ft	°/100ft	ft	ft	ft	ft
3550.00	89.50	179.7	2962.40	-954.35	4.66	0.00	954.36	1916661.66	11977444.05	630.60
3600.00	89.50	179.7	2962.83	-1004.35	4.91	0.00	1004.36	1916661.91	11977394.05	630.17
3650.00	89.50	179.7	2963.27	-1054.35	5.15	0.00	1054.36	1916662.15	11977344.05	629.73
3700.00	89.50	179.7	2963.70	-1104.34	5.40	0.00	1104.36	1916662.40	11977294.06	629.30
3750.00	89.50	179.7	2964.14	-1154.34	5.64	0.00	1154.36	1916662.64	11977244.06	628.86
3800.00	89.50	179.7	2964.58	-1204.34	5.89	0.00	1204.35	1916662.89	11977194.06	628.42
3850.00	89.50	179.7	2965.01	-1254.34	6.13	0.00	1254.35	1916663.13	11977144.06	627.99
3900.00	89.50	179.7	2965.45	-1304.33	6.37	0.00	1304.35	1916663.37	11977094.07	627.55
3950.00	89.50	179.7	2965.89	-1354.33	6.62	0.00	1354.35	1916663.62	11977044.07	627.11
4000.00	89.50	179.7	2966.32	-1404.33	6.86	0.00	1404.35	1916663.86	11976994.07	626.68
4050.00	89.50	179.7	2966.76	-1454.33	7.11	0.00	1454.34	1916664.11	11976944.07	626.24
4100.00	89.50	179.7	2967.20	-1504.32	7.35	0.00	1504.34	1916664.35	11976894.08	625.80
4150.00	89.50	179.7	2967.63	-1554.32	7.60	0.00	1554.34	1916664.60	11976844.08	625.37
4200.00	89.50	179.7	2968.07	-1604.32	7.84	0.00	1604.34	1916664.84	11976794.08	624.93
4250.00	89.50	179.7	2968.50	-1654.32	8.08	0.00	1654.34	1916665.08	11976744.08	624.50
4300.00	89.50	179.7	2968.94	-1704.31	8.33	0.00	1704.33	1916665.33	11976694.09	624.06
4350.00	89.50	179.7	2969.38	-1754.31	8.57	0.00	1754.33	1916665.57	11976644.09	623.62
4400.00	89.50	179.7	2969.81	-1804.31	8.82	0.00	1804.33	1916665.82	11976594.09	623.19
4450.00	89.50	179.7	2970.25	-1854.31	9.06	0.00	1854.33	1916666.06	11976544.09	622.75
4500.00	89.50	179.7	2970.69	-1904.30	9.31	0.00	1904.33	1916666.31	11976494.10	622.31
4550.00	89.50	179.7	2971.12	-1954.30	9.55	0.00	1954.32	1916666.55	11976444.10	621.88
4600.00	89.50	179.7	2971.56	-2004.30	9.79	0.00	2004.32	1916666.79	11976394.10	621.44
4650.00	89.50	179.7	2971.99	-2054.30	10.04	0.00	2054.32	1916667.04	11976344.10	621.01
4700.00	89.50	179.7	2972.43	-2104.29	10.28	0.00	2104.32	1916667.28	11976294.11	620.57
4750.00	89.50	179.7	2972.87	-2154.29	10.53	0.00	2154.32	1916667.53	11976244.11	620.13
4800.00	89.50	179.7	2973.30	-2204.29	10.77	0.00	2204.32	1916667.77	11976194.11	619.70
4850.00	89.50	179.7	2973.74	-2254.29	11.02	0.00	2254.31	1916668.02	11976144.11	619.26
4900.00	89.50	179.7	2974.18	-2304.28	11.26	0.00	2304.31	1916668.26	11976094.12	618.82
4950.00	89.50	179.7	2974.61	-2354.28	11.51	0.00	2354.31	1916668.51	11976044.12	618.39
5000.00	89.50	179.7	2975.05	-2404.28	11.75	0.00	2404.31	1916668.75	11975994.12	617.95
5050.00	89.50	179.7	2975.49	-2454.28	11.99	0.00	2454.31	1916668.99	11975944.12	617.51
5100.00	89.50	179.7	2975.92	-2504.27	12.24	0.00	2504.30	1916669.24	11975894.13	617.08
5150.00	89.50	179.7	2976.36	-2554.27	12.48	0.00	2554.30	1916669.48	11975844.13	616.64
5200.00	89.50	179.7	2976.79	-2604.27	12.73	0.00	2604.30	1916669.73	11975794.13	616.21
5250.00	89.50	179.7	2977.23	-2654.27	12.97	0.00	2654.30	1916669.97	11975744.13	615.77
5300.00	89.50	179.7	2977.67	-2704.26	13.22	0.00	2704.30	1916670.22	11975694.14	615.33
5350.00	89.50	179.7	2978.10	-2754.26	13.46	0.00	2754.29	1916670.46	11975644.14	614.90

Klondike State Com 2H, Plan 1

Operator	Mack Energy Corp	Units	feet, °/100ft	15:54 Wednesday, April 13, 2022	Page 3 of 5
Field	Round Tank	County	Chaves	Vertical Section Azimuth	179.72
Well Name	Klondike State Com 2H	State	New Mexico	Survey Calculation Method	Minimum Curvature
Plan	1	Country	USA	Database	Access
Location	SL: 710 FSL & 1650 FEL Section 23-T15S-R28E BHL: 760 FNL & 1650 FEL Section 35-T15S-R28E			Map Zone	UTM
Site				Surface X	1916657
Slot Name				Surface Y	11978398.4
Well Number	2H	UWI		Surface Z	3593
Project		API		Ground Level	3575
		MD/TVD Ref	KB		
				Local North Ref	Grid

DIRECTIONAL WELL PLAN

MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN*	SysTVD*
ft	deg	deg	ft	ft	ft	°/100ft	ft	ft	ft	ft
5400.00	89.50	179.7	2978.54	-2804.26	13.70	0.00	2804.29	1916670.70	11975594.14	614.46
5450.00	89.50	179.7	2978.98	-2854.26	13.95	0.00	2854.29	1916670.95	11975544.14	614.02
5500.00	89.50	179.7	2979.41	-2904.25	14.19	0.00	2904.29	1916671.19	11975494.15	613.59
5550.00	89.50	179.7	2979.85	-2954.25	14.44	0.00	2954.29	1916671.44	11975444.15	613.15
5600.00	89.50	179.7	2980.28	-3004.25	14.68	0.00	3004.28	1916671.68	11975394.15	612.72
5650.00	89.50	179.7	2980.72	-3054.25	14.93	0.00	3054.28	1916671.93	11975344.15	612.28
5700.00	89.50	179.7	2981.16	-3104.24	15.17	0.00	3104.28	1916672.17	11975294.16	611.84
5750.00	89.50	179.7	2981.59	-3154.24	15.41	0.00	3154.28	1916672.41	11975244.16	611.41
5800.00	89.50	179.7	2982.03	-3204.24	15.66	0.00	3204.28	1916672.66	11975194.16	610.97
5850.00	89.50	179.7	2982.47	-3254.24	15.90	0.00	3254.28	1916672.90	11975144.16	610.53
5900.00	89.50	179.7	2982.90	-3304.23	16.15	0.00	3304.27	1916673.15	11975094.17	610.10
5950.00	89.50	179.7	2983.34	-3354.23	16.39	0.00	3354.27	1916673.39	11975044.17	609.66
6000.00	89.50	179.7	2983.78	-3404.23	16.64	0.00	3404.27	1916673.64	11974994.17	609.22
6050.00	89.50	179.7	2984.21	-3454.23	16.88	0.00	3454.27	1916673.88	11974944.17	608.79
6100.00	89.50	179.7	2984.65	-3504.22	17.13	0.00	3504.27	1916674.13	11974894.18	608.35
6150.00	89.50	179.7	2985.08	-3554.22	17.37	0.00	3554.26	1916674.37	11974844.18	607.92
6200.00	89.50	179.7	2985.52	-3604.22	17.61	0.00	3604.26	1916674.61	11974794.18	607.48
6250.00	89.50	179.7	2985.96	-3654.22	17.86	0.00	3654.26	1916674.86	11974744.18	607.04
6300.00	89.50	179.7	2986.39	-3704.21	18.10	0.00	3704.26	1916675.10	11974694.19	606.61
6350.00	89.50	179.7	2986.83	-3754.21	18.35	0.00	3754.26	1916675.35	11974644.19	606.17
6400.00	89.50	179.7	2987.27	-3804.21	18.59	0.00	3804.25	1916675.59	11974594.19	605.73
6450.00	89.50	179.7	2987.70	-3854.21	18.84	0.00	3854.25	1916675.84	11974544.19	605.30
6500.00	89.50	179.7	2988.14	-3904.20	19.08	0.00	3904.25	1916676.08	11974494.20	604.86
6550.00	89.50	179.7	2988.58	-3954.20	19.32	0.00	3954.25	1916676.32	11974444.20	604.42
6600.00	89.50	179.7	2989.01	-4004.20	19.57	0.00	4004.25	1916676.57	11974394.20	603.99
6650.00	89.50	179.7	2989.45	-4054.20	19.81	0.00	4054.24	1916676.81	11974344.20	603.55
6700.00	89.50	179.7	2989.88	-4104.19	20.06	0.00	4104.24	1916677.06	11974294.21	603.12
6750.00	89.50	179.7	2990.32	-4154.19	20.30	0.00	4154.24	1916677.30	11974244.21	602.68
6800.00	89.50	179.7	2990.76	-4204.19	20.55	0.00	4204.24	1916677.55	11974194.21	602.24
6850.00	89.50	179.7	2991.19	-4254.19	20.79	0.00	4254.24	1916677.79	11974144.21	601.81
6900.00	89.50	179.7	2991.63	-4304.18	21.03	0.00	4304.24	1916678.03	11974094.22	601.37
6950.00	89.50	179.7	2992.07	-4354.18	21.28	0.00	4354.23	1916678.28	11974044.22	600.93
7000.00	89.50	179.7	2992.50	-4404.18	21.52	0.00	4404.23	1916678.52	11973994.22	600.50
7050.00	89.50	179.7	2992.94	-4454.18	21.77	0.00	4454.23	1916678.77	11973944.22	600.06
7100.00	89.50	179.7	2993.37	-4504.17	22.01	0.00	4504.23	1916679.01	11973894.23	599.63
7150.00	89.50	179.7	2993.81	-4554.17	22.26	0.00	4554.23	1916679.26	11973844.23	599.19
7200.00	89.50	179.7	2994.25	-4604.17	22.50	0.00	4604.22	1916679.50	11973794.23	598.75

Klondike State Com 2H, Plan 1

Operator	Mack Energy Corp	Units	feet, °/100ft	15:54 Wednesday, April 13, 2022	Page 4 of 5
Field	Round Tank	County	Chaves	Vertical Section Azimuth	179.72
Well Name	Klondike State Com 2H	State	New Mexico	Survey Calculation Method	Minimum Curvature
Plan	1	Country	USA	Database	Access
Location	SL: 710 FSL & 1650 FEL Section 23-T15S-R28E BHL: 760 FNL & 1650 FEL Section 35-T15S-R28E			Map Zone	UTM
Site				Surface X	1916657
Slot Name				Surface Y	11978398.4
Well Number	2H	UWI		Surface Z	3593
Project		API		Ground Level	3575
		MD/TVD Ref	KB		Global Z Ref KB
					Local North Ref Grid

DIRECTIONAL WELL PLAN

MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN*	SysTVD*
ft	deg	deg	ft	ft	ft	°/100ft	ft	ft	ft	ft
7250.00	89.50	179.7	2994.68	-4654.17	22.74	0.00	4654.22	1916679.74	11973744.23	598.32
7300.00	89.50	179.7	2995.12	-4704.16	22.99	0.00	4704.22	1916679.99	11973694.24	597.88
7350.00	89.50	179.7	2995.56	-4754.16	23.23	0.00	4754.22	1916680.23	11973644.24	597.44
7400.00	89.50	179.7	2995.99	-4804.16	23.48	0.00	4804.22	1916680.48	11973594.24	597.01
7450.00	89.50	179.7	2996.43	-4854.16	23.72	0.00	4854.21	1916680.72	11973544.24	596.57
7500.00	89.50	179.7	2996.87	-4904.15	23.97	0.00	4904.21	1916680.97	11973494.25	596.13
7550.00	89.50	179.7	2997.30	-4954.15	24.21	0.00	4954.21	1916681.21	11973444.25	595.70
7600.00	89.50	179.7	2997.74	-5004.15	24.46	0.00	5004.21	1916681.46	11973394.25	595.26
7650.00	89.50	179.7	2998.17	-5054.15	24.70	0.00	5054.21	1916681.70	11973344.25	594.83
7700.00	89.50	179.7	2998.61	-5104.14	24.94	0.00	5104.20	1916681.94	11973294.26	594.39
7750.00	89.50	179.7	2999.05	-5154.14	25.19	0.00	5154.20	1916682.19	11973244.26	593.95
7800.00	89.50	179.7	2999.48	-5204.14	25.43	0.00	5204.20	1916682.43	11973194.26	593.52
7850.00	89.50	179.7	2999.92	-5254.14	25.68	0.00	5254.20	1916682.68	11973144.26	593.08
7900.00	89.50	179.7	3000.36	-5304.13	25.92	0.00	5304.20	1916682.92	11973094.27	592.64
7950.00	89.50	179.7	3000.79	-5354.13	26.17	0.00	5354.20	1916683.17	11973044.27	592.21
8000.00	89.50	179.7	3001.23	-5404.13	26.41	0.00	5404.19	1916683.41	11972994.27	591.77
8050.00	89.50	179.7	3001.66	-5454.13	26.65	0.00	5454.19	1916683.65	11972944.27	591.34
8100.00	89.50	179.7	3002.10	-5504.12	26.90	0.00	5504.19	1916683.90	11972894.28	590.90
8150.00	89.50	179.7	3002.54	-5554.12	27.14	0.00	5554.19	1916684.14	11972844.28	590.46
8200.00	89.50	179.7	3002.97	-5604.12	27.39	0.00	5604.19	1916684.39	11972794.28	590.03
8250.00	89.50	179.7	3003.41	-5654.12	27.63	0.00	5654.18	1916684.63	11972744.28	589.59
8300.00	89.50	179.7	3003.85	-5704.11	27.88	0.00	5704.18	1916684.88	11972694.29	589.15
8350.00	89.50	179.7	3004.28	-5754.11	28.12	0.00	5754.18	1916685.12	11972644.29	588.72
8400.00	89.50	179.7	3004.72	-5804.11	28.36	0.00	5804.18	1916685.36	11972594.29	588.28
8450.00	89.50	179.7	3005.16	-5854.11	28.61	0.00	5854.18	1916685.61	11972544.29	587.84
8500.00	89.50	179.7	3005.59	-5904.10	28.85	0.00	5904.17	1916685.85	11972494.30	587.41
8550.00	89.50	179.7	3006.03	-5954.10	29.10	0.00	5954.17	1916686.10	11972444.30	586.97
8600.00	89.50	179.7	3006.46	-6004.10	29.34	0.00	6004.17	1916686.34	11972394.30	586.54
8650.00	89.50	179.7	3006.90	-6054.10	29.59	0.00	6054.17	1916686.59	11972344.30	586.10
8700.00	89.50	179.7	3007.34	-6104.09	29.83	0.00	6104.17	1916686.83	11972294.31	585.66
8750.00	89.50	179.7	3007.77	-6154.09	30.07	0.00	6154.16	1916687.07	11972244.31	585.23
8800.00	89.50	179.7	3008.21	-6204.09	30.32	0.00	6204.16	1916687.32	11972194.31	584.79
8850.00	89.50	179.7	3008.65	-6254.09	30.56	0.00	6254.16	1916687.56	11972144.31	584.35
8900.00	89.50	179.7	3009.08	-6304.08	30.81	0.00	6304.16	1916687.81	11972094.32	583.92
8950.00	89.50	179.7	3009.52	-6354.08	31.05	0.00	6354.16	1916688.05	11972044.32	583.48
9000.00	89.50	179.7	3009.96	-6404.08	31.30	0.00	6404.16	1916688.30	11971994.32	583.04
9050.00	89.50	179.7	3010.39	-6454.08	31.54	0.00	6454.15	1916688.54	11971944.32	582.61

Klondike State Com 2H, Plan 1

Operator	Mack Energy Corp	Units	feet, °/100ft	15:54 Wednesday, April 13, 2022 Page 5 of 5	
Field	Round Tank	County	Chaves	Vertical Section Azimuth	179.72
Well Name	Klondike State Com 2H	State	New Mexico	Survey Calculation Method	Minimum Curvature
Plan	1	Country	USA	Database	Access
Location	SL: 710 FSL & 1650 FEL Section 23-T15S-R28E BHL: 760 FNL & 1650 FEL Section 35-T15S-R28E			Map Zone	UTM
Site				Surface X	1916657
Slot Name				Surface Y	11978398.4
Well Number	2H	API		Surface Z	3593
Project		MD/TVD Ref	KB	Ground Level	3575
				Lat Long Ref	
				Surface Long	
				Surface Lat	
				Global Z Ref	KB
				Local North Ref	Grid

DIRECTIONAL WELL PLAN

MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN*	SysTVD*
ft	deg	deg	ft	ft	ft	°/100ft	ft	ft	ft	ft
9100.00	89.50	179.7	3010.83	-6504.07	31.79	0.00	6504.15	1916688.79	11971894.33	582.17
9150.00	89.50	179.7	3011.26	-6554.07	32.03	0.00	6554.15	1916689.03	11971844.33	581.74
9200.00	89.50	179.7	3011.70	-6604.07	32.27	0.00	6604.15	1916689.27	11971794.33	581.30
9250.00	89.50	179.7	3012.14	-6654.07	32.52	0.00	6654.15	1916689.52	11971744.33	580.86
9300.00	89.50	179.7	3012.57	-6704.06	32.76	0.00	6704.14	1916689.76	11971694.34	580.43
*** TD (at MD = 9329.50)										
9329.50	89.50	179.7	3012.83	-6733.56	32.91	0.00	6733.64	1916689.91	11971664.84	580.17