Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

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.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM86024

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
CYPRESS 28 FEDERAL 1H

2. Name of Operator
OXY USA INCORPORATED
Contact: DAVID STEWART
E-Mail: david_stewart@oxy.com

9. API Well No.
30-015-37249-00-S1

3a. Address
5 GREENWAY PLAZA SUITE 110
HOUSTON, TX 77046-0521

3b. Phone No. (include area code)
Ph: 432.685.5717

10. Field and Pool or Exploratory Area
LAGUNA SALADO-BONE SPRING, South
96857

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 28 T23S R29E SWSW 330FSL 440FWL

11. County or Parish, State
EDDY 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	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☒ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

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 recomplete 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 recompletion 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.

1. MIRU pulling unit & reverse unit. POOH w/ pump & rods, ND WH, NU BOP. POOH w/ tbg and scan.

2. PU BHA and clean out to approximately 10250'M. Pump WF PLA fluid loss product to seal existing perfs, circ hole clean, POOH.

3. RIH w/ pkr & RBP, set RBP @ approximately 8350', load hole, test RBP to 1000#. Rel pkr, load hole, test casing to 6200# for 15 min., if test is good, rel pkr & RBP & POOH.

4. RIH w/ 4-1/4" X 5-1/2" Frac Patch liner & set @ approximately 8400-10250'M, see attached for detail.

5. ND BOP, RDPU, NU frac tree, perf & frac via 5-1/2" X 4-1/4" liner, in 9 stages w/ zone isolation

NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 26 2017
RECEIVED

Accepted for record - NMOCD 12-27-17

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

Electronic Submission #394341 verified by the BLM Well Information System
For OXY USA INCORPORATED, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 11/26/2017 (18PP0314SE)

Name *(Printed/Typed)* DAVID STEWART — Title REGULATORY ADVISOR

Signature (Electronic Submission) — Date 11/07/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CHARLES NIMMER — Title PETROLEUM ENGINEER — Date 12/19/2017

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 Carlsbad

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 ****

KP 12-28-17

Additional data for EC transaction #394341 that would not fit on the form

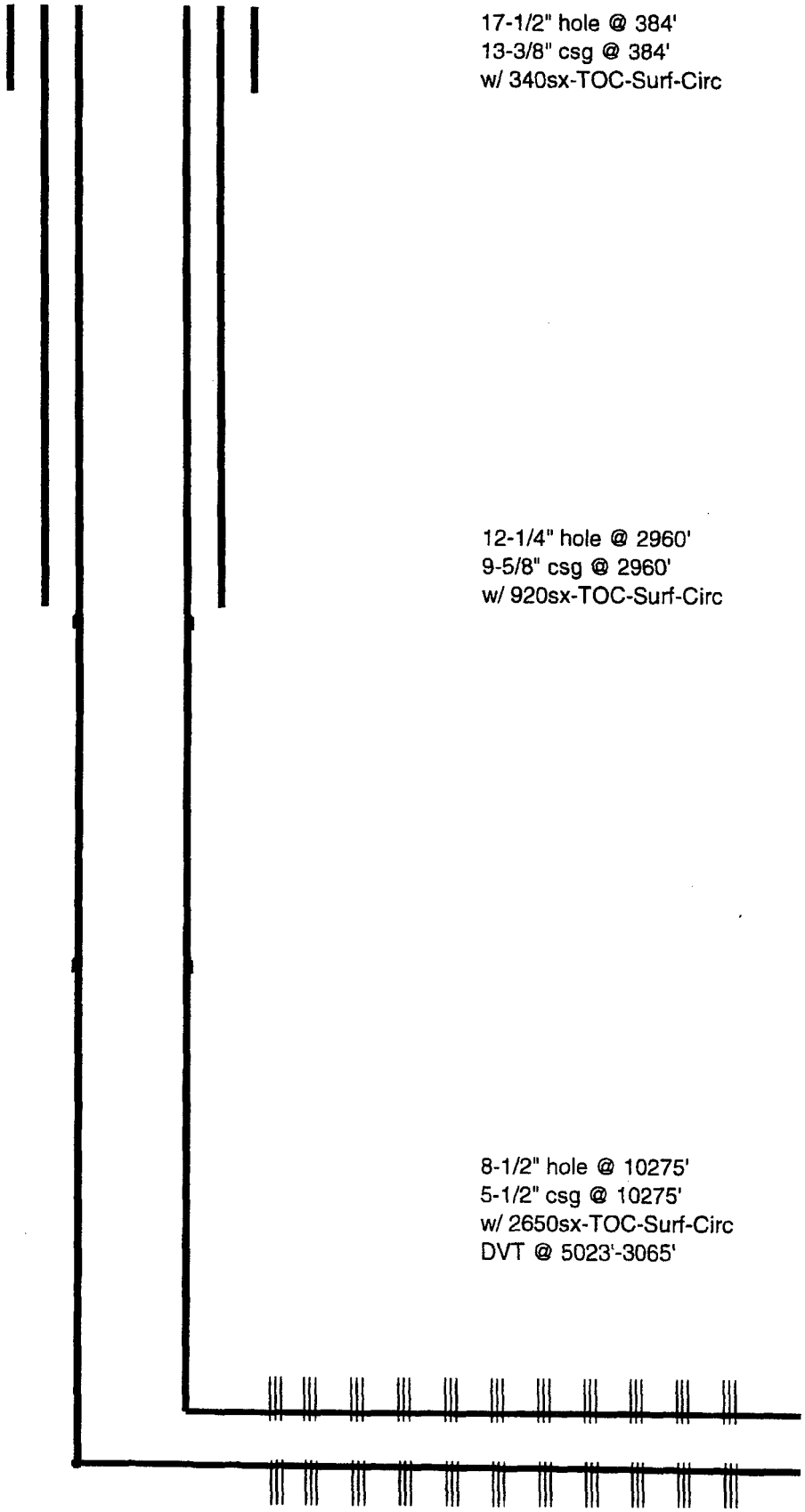
32. Additional remarks, continued

w/ 8 flow through composite plugs from approximately 8369-9950', see attached for detail.

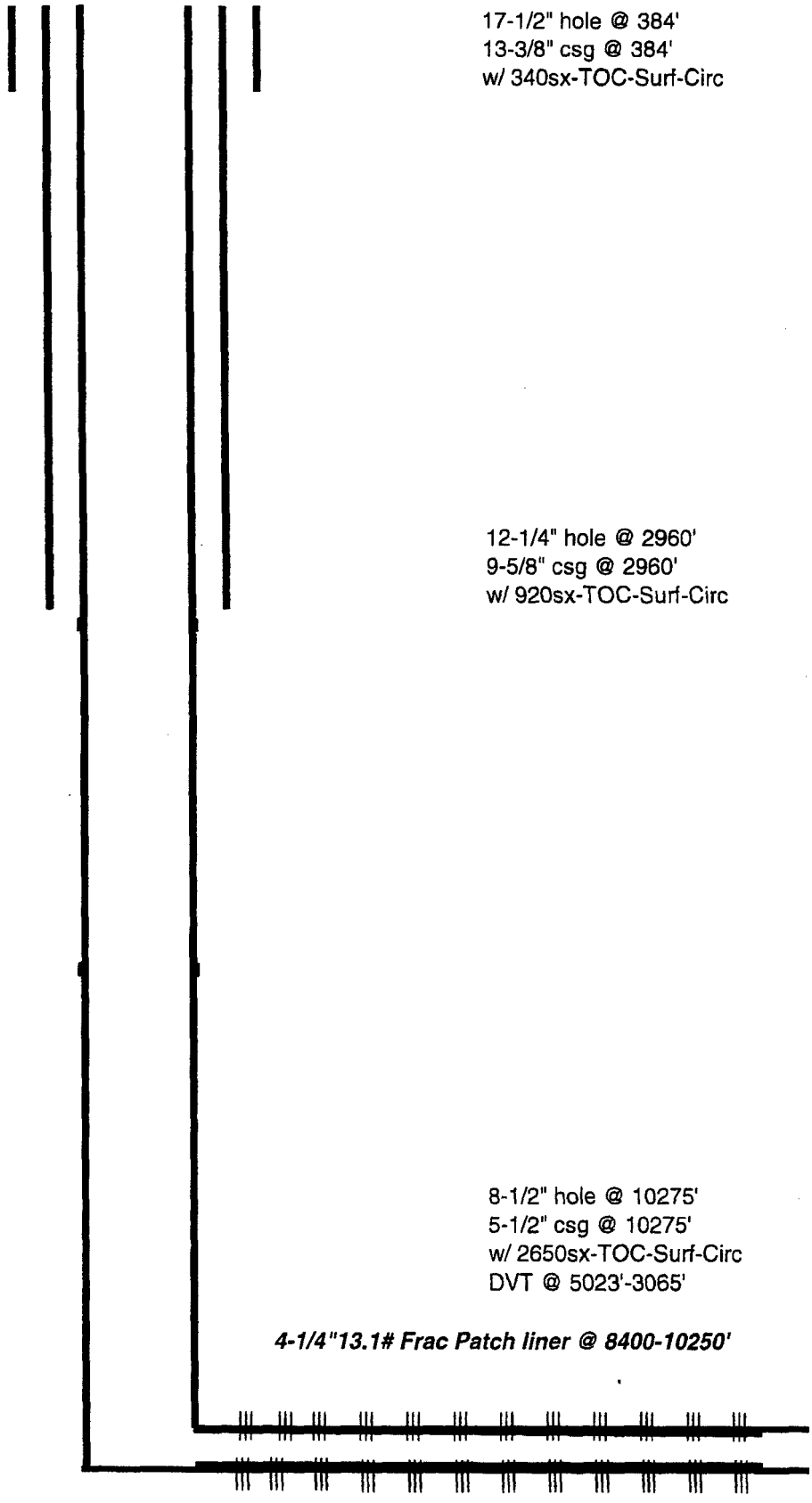
6. After frac, MIRU CTU, RIH & drill out plugs & CO to PBTD @ 10250'. Circ hole w/ N2, then flow back and test.

7. After flow back, turn well over to operations, artificial lift procedure to be decided.

OXY USA Inc. - Current
Cypress 28 Federal #1H
API No. 30-015-37249



OXY USA Inc. - Proposed
Cypress 28 Federal #1H
API No. 30-015-37249



17-1/2" hole @ 384'
13-3/8" csg @ 384'
w/ 340sx-TOC-Surf-Circ

12-1/4" hole @ 2960'
9-5/8" csg @ 2960'
w/ 920sx-TOC-Surf-Circ

8-1/2" hole @ 10275'
5-1/2" csg @ 10275'
w/ 2650sx-TOC-Surf-Circ
DVT @ 5023'-3065'

4-1/4"13.1# Frac Patch liner @ 8400-10250'

Perfs @ 8369-9950'

TD - 10275'M 7742'V PBTD-10250'M 7742'V

OXY USA Inc. – Cypress 28 Federal #1H – 30-015-37249

Well Prep Procedure:

- MIRU PU and rig equipment
- Ensure well is dead
- ND horse head, LD polished rod and stuffing box
- MU rods equipment and begin to POOH w/rods & pump (send to inspection company)
- MU tubing equipment
- Release TAC at 6266'and POOH w/ 2-7/8" tbg. Send to yard for inspection
- RIH with cleanout BHA below.

BHA as following per Mohawk Energy design:

Table 1: Recommended Clean Out/Drift BHA – (Exact BHA can change depending on connections)

Qty	*Description*	*Mohawk Part Number*	*Connection Up*	*Connection Down*	*Supplier*
~226	2-7/8" 10.4# S-135 AOH		2-7/8" AOH Box	2-7/8" AOH Pin	Operator
1	Crossover		2-7/8" AOH Box	2-7/8" 7.9# PH6 Pin	Operator
~110	2-7/8" 7.9# P-110 PH6		2-7/8" 7.9# PH6 Box	2-7/8" 7.9# PH6 Pin	Operator
1	Ball drop drain sub 625 psi/pin	P-02339	2-7/8" 7.9# PH6 Box	2-7/8" 7.9# PH6 Pin	Mohawk
1	Crossover	P-02353	2-7/8" 7.9# PH6 Box	2-7/8" API Reg Pin	Mohawk
1	4.798" String mill	O-00338	2-7/8" API Reg Box	2-7/8" API Reg Pin	Mohawk
1	String Magnet		2-7/8" API Reg Box	2-7/8" API Reg Pin	Mohawk
1	4.798" String mill	O-00338	2-7/8" API Reg Box	2-7/8" API Reg Pin	Mohawk
1	Bit Sub	P-02382	2-7/8" API REG Box	2-7/8" API REG Box	Mohawk
1	Venturi Basket		2-7/8" API Reg Box	N/A	Mohawk

- RU power swivel if needed and cleanout to PBTD (use air foam unit/ nitrogen for circulation if needed)
- POOH with BHA and workstring
- RIH with work string to 8350' and test casing to 6200 psi or max treating pressure, whichever is lower.
- Bleed off pressure and RBIH to latch on RBP, release RBP and begin POOH LD w/ RBP, Packer and 2 7/8" tbg)
- MIRU Mohawk Energy, prep to RIH w/ Liner per Mohawk Procedure as following:

Mohawk Energy RIH Procedure:

1) Liner Make Up and Deployment:

1. Conduct a safety meeting. Go over parameters such as number of joints to pick up, safe running speeds, safe running weights, and important depths. Mohawk rep will discuss circulation tool function.
2. Discuss well control options before running the liner.
3. Rig up Mohawk liner lifting subs, TIW valve, and circulating crossover subs.
4. Rig up casing handling equipment including slips and bowls, flush joint elevators, and tongs (if used).
5. Pick up setting tool with elevators using Mohawk's lift nubbin as a shoulder. Run in hole and set in slips (some applications require the slips to be set on the seal joint). Install a safety clamp.
6. Make up liner in final proposed order per *MetalPatch* liner tally sheet.
   - Install lift nubbin on each joint.
   - Mohawk's proprietary r2m thread is made up dopeless. Do not put dope on r2m threads.
   - Make up each r2m connection with Mohawk provided wrenches or to 1,300 ft-lbs with casing crew tongs.
   - Install safety clamp on every joint.
   - Designate one man to watch the lift nubbin while making up joints to ensure it spins freely and does not back off while making a connection.
7. After running all liner joints, pick up the exit joint with the exit joint lift nubbin. Land the exit joint as low as possible in the slips.
8. Rig up the Mohawk false rotary table on top of the exit joint.
9. Swap over to the Mohawk inner string circulating crossover assembly.
10. Rig up the work string slips on top of the Mohawk table. Cover the hole.
11. Swap all handling equipment to run work string inside of the Mohawk liner joints.
12. Pick up the inner string BHA (please see Table in page 13 above). Use minimum dope only on the pins.
13. Check tally and have a meeting to discuss latch-in depth (the inner string BHA will latch into the setting tool and pick up the liner).
14. Begin tripping in hole with work string:
    - Confirm latch-in depth.
    - 10ft above the setting tool, slow the trip in speed to 10 ft/min.
    - Continue to run in hole and latch into the setting tool by slacking off.
    - After latching in, pick up slowly and check to see the tool is latched and the liner lifts out of the slips.
    - Set down and pick up again to check latch-in (resetting the slip and bowl may be required).
    - Use Mohawk supplied jack to confirm tool is latched in for liners less than 100ft (see Appendix 5).
    - Pick up out of the slips.
15. Rig down the work string slips, rig down Mohawk table, and rig down the liner slips.
16. Rig up the work string slips and begin running the liner in the hole.
    - RIH 1 min/stand
    - If anything is tagged while RIH, notify a Mohawk representative.
    - Use caution on and off slips to avoid jarring the liner.
    - Circulate through tool at 0.5 BPM every 50 stands for 3 BBL.
    - If in a horizontal, take pick up and slack off weights before entering the lateral.
    - Monitor pick up and slack off weights.
    - After entering the lateral, pump down tubing 0.5 BPM every 10 stands.
17. Trip in hole to setting depth.
18. If using a plug or no-go for depth correlation, tag the plug and pull up accordingly.
19. If only using the tally for depth, run in past the target by at least 1 joint, pull back up to setting depth and measure depth while on up weight.

2) Liner Expansion Procedure:

1. Once depth, conduct a safety meeting. Review all tallies and confirm depths.
2. Rig up the pump-in sub, tubing swivel (chicksan), high-pressure hose, and expansion pump on to the tubing.
3. Pressure test surface lines to 6000 psi:
    - Ensure the liner is in exact position prior to starting the test.
    - Ensure pump kick-outs (or pop offs) are working.
    - Ensure there is a way to bleed pressure from tubing.
4. Open tubing and pump through the Mohawk setting tool, break circulation if well allows.
    - Ensure the liner is in exact position prior to circulating.
    - Set kick-outs to 500psi.
    - Do not exceed 0.5 BPM flow rate to circulate.
    - If pressure increases while circulating, do not bleed off.
5. After circulation, set kick-outs to 4000 psi.
6. Increase rate to 1 BPM, pressure will begin to build. Bring pressure to 3,500 psi and hold for 1 minute (hold first stroke only).
7. Bleed tubing down to zero pressure.
8. Mark the work string at the slips for reference.
9. With the rig, pull the tubing to reset the tool with 3,000-5,000 lbs over string weight or 3' (whichever occurs first). Mark the new position and measure.
10. Repeat Steps 6 through 9 until all lower seals are expanded.
11. After lower seals are expanded, begin pulling out with the rig:
    - Mohawk will recommend max hook loads to ensure safe operations.
    - Pull force will be string weight plus expansion force.
    - Expansion force can vary as the expansion tool moves through connections and wellbore restrictions.
    - If max hook load is seen, stop, slack down to neutral hook load, rig up the hose, and repeat Steps 6-9.
    - Pup joints can be on location to help with slacking down.
12. Stop expansion before reaching the upper seals.
    - Check progress using pipe tally.
    - Keep stretch in mind when calculating position.
13. Rig up the high pressure hose on to the tubing.
14. Increase rate to 1 BPM, pressure will begin to build. If liner compression is required, follow Mohawk direction. Otherwise, increase pressure to 3,700 psi.
    - Bring pressure to 1,000 psi and hold.
    - Slack down with pressure on tubing to compress the liner.
    - Increase pressure to 3,700 psi. While holding pressure, pick back up to neutral.
15. Bleed tubing down to zero pressure.
16. Mark the work string at the slips for reference.
17. With the rig, pull the tubing to reset the tool with 3,000-5,000 lbs over string weight. Mark the new position and measure.
18. Repeat steps 14-17 until upper seals are expanded:
    - Use pipe tally and pressure response to gauge when the upper seals have been expanded.
    - Upper seals should be expanded with hydraulic expansion and not mechanical over pull.
19. Clear the rig of all unnecessary personnel.
20. Begin expanding the liner by pulling with the rig.
    - Pull slowly. - Hook load will decrease once the setting tool exits the liner.
    - When exiting the top of the patch insure all pressure has been bled off the tubing.
21. Tag the top of the liner and confirm depth, estimated Top of liner at ~ 8,400' (Existing Top Perf at 8400')
22. Drop ball to open drain sub.
23. POOH and laydown all Mohawk tools
24. RDMO PU

Mohawk Energy Flush Joint Specification Data Sheet

4.25 inch, 0.31 wall x 5.5 inch, 20 lb/ft FracPatch Specifications					
Expandable Pipe Body					
Pre-Expansion			**Post Expansion**		
OD	4.250	*inches*	OD	4.678	*inches*
ID	3.630	*inches*	ID	4.084	*inches*
Wall Thickness	0.310	*inches*	Wall Thickness	0.297	*inches*
Weight	13.100	*lb/ft*	Drift	4.024	*inches*
Drift	3.505	*inches*	Internal Yield	10,296	*psi*
Seal Joint OD	4.490	*inches*	Collapse	6,024	*psi*
Seal Thickness	0.120	*inches*	Expansion Ratio	12.497	*%*

Expandable Connection					
Pre-Expansion			**Post Expansion**		
Connection OD	4.310	*inches*	Connection OD	4.738	*inches*
Connection ID	3.600	*inches*	Connection ID	4.084	*inches*
Drift	3.505	*inches*	Drift	4.024	*inches*
Tensile Rating	142,286	*lbs*	Internal Yield	10,296	*psi*
Compressive Rating	142,286	*lbs*	Collapse	6,024	*psi*
Max DLS	36.01	*°/100ft*	Tensile Rating	151,612	*lbs*
Optimum Torque	1,360	*ft-lbs*	Compressive Rating	136,451	*lbs*
Max Torque	1,496	*ft-lbs*	Yield Torque	1,700	*ft-lbs*

Mohawk Energy Setting Tool:

***Appendix A1*: Setting Tool**

Tool connection up	[illegible]
Tool weight	[illegible] lbs
Tool length	10.0 ft
Expansion stroke	[illegible] ft
Max. dog-leg severity	[illegible] °/100ft
Axial load rating	200,000 lbs
Max. pressure	[illegible] psi
Max. temperature	400 °F
Circulation flow rate	90 gpm
Valve shut off flow rate	[illegible] gpm
Pressure/force conversion	44 lbs/psi

Event	Pressure or Force
Stabbing sub latching load	500 lbs
Max. slack off during deployment	15,000 lbs
Max. overpull during deployment	25,000 lbs
Drive unit shear disk	1,750 psi
Tool reset	3,000-5,000 lbs
Safety burst disk relief	5,000 psi

Well Prep- Coil Tubing TCP and Stimulation operations:

- Conduct pre-job safety meeting- discuss scope of work and hazards
- Check wellhead pressure and bleed off pressure if any to grounded flowback tank
- MIRU Cameron WH Company and equipment.
- Install 10M frac stack on wellhead
- MIRU 2"CTU with TCP guns
- RIH with TCP guns and perforate stage 1 w/ 4 clusters (per attached perf design).
- Spot 7.5% HCl acid and breakdown stage 1
- RDMO 2"CTU.
- MIRU frac and WL company
- Frac stage 1 per the pump schedule below
- RIH with WL and plug & perf for stage 2 and frac afterwards
- Repeat process for the remaining stages (estimated 21 total stages)
- RDMO frac and WL company
- Open well to flowback

Proposed Perforations & Plug Depths:

Hardline	Entering	8400 ft. MD
	Exiting	10000 ft. MD

			6 shots per cluster	6 shots per cluster	6 shots per cluster	6 shots per cluster	
			Cluster 1	Cluster 2	Cluster 3	Cluster 4	Plug (top)
Stage 1	4 guns at 60 degree phasing	Top	9796	9847	9898	9949	9975
		Bottom	9797	9848	9899	9950	
Stage 2	4 guns at 60 degree phasing	Top	9592	9643	9694	9745	9771
		Bottom	9593	9644	9695	9746	
Stage 3	4 guns at 60 degree phasing	Top	9388	9439	9490	9541	9567
		Bottom	9389	9440	9491	9542	
Stage 4	4 guns at 60 degree phasing	Top	9184	9235	9286	9337	9363
		Bottom	9185	9236	9287	9338	
Stage 5	4 guns at 60 degree phasing	Top	8980	9031	9082	9133	9159
		Bottom	8981	9032	9083	9134	
Stage 6	4 guns at 60 degree phasing	Top	8776	8827	8878	8929	8955
		Bottom	8777	8828	8879	8930	
Stage 7	4 guns at 60 degree phasing	Top	8572	8623	8674	8725	8751
		Bottom	8573	8624	8675	8726	
Stage 8	4 guns at 60 degree phasing	Top	8368	8419	8470	8521	8547
		Bottom	8369	8420	8471	8522	

Proposed Pump Schedule:

Slickwater 1 (5,000 ft)			2000 #/ft_50 ft x 4 Clusters_Slickwater (5000 ft)								
			Fluid Information					Proppant Information			
#	Time [min]	Type	Rate [bpm]	Clean [gals]	Dirty [gals]	Cum. Dirty [gals]	Description	Prop. Conc. [PPA]	Description	Stage Sand [lbs]	Cum. Sand [lbs]
1	9.52	Breakdown	20	5000	8,000	8,000	Slick Water			-	-
2	11.11	Acid	80	2000	2,000	10,000	15% HCl				-
3	20.04	Pad	80	30000	30,000	40,000	Slick Water			-	-
4	25.99	Sand-Laden	80	20000	20,226	60,226	Slick Water	0.25	100 Mesh	5,000	5,000
5	31.94	Sand-Laden	80	20000	20,452	80,679	Slick Water	0.50	100 Mesh	10,000	15,000
6	40.87	Sand-Laden	80	30000	31,018	111,697	Slick Water	0.75	100 Mesh	22,500	37,500
7	51.29	Sand-Laden	80	35000	36,584	148,280	Slick Water	1.00	100 Mesh	35,000	72,500
8	63.79	Sand-Laden	80	42000	44,375	192,656	Slick Water	1.25	100 Mesh	52,500	125,000
9	78.67	Sand-Laden	80	50000	53,394	246,049	Slick Water	1.50	100 Mesh	75,000	200,000
10	83.13	Sweep	80	15000	15,000	261,049	Slick Water				200,000
11	88.19	Sand-Laden	80	17000	17,385	278,434	Slick Water	0.50	40/70 White	8,500	208,500
12	94.15	Sand-Laden	80	20000	20,905	299,339	Slick Water	1.00	40/70 White	20,000	228,500
13	100.10	Sand-Laden	80	20000	21,131	320,470	Slick Water	1.25	40/70 White	25,000	253,500
14	107.54	Sand-Laden	80	25000	26,697	347,167	Slick Water	1.50	40/70 White	37,500	291,000
15	115.87	Sand-Laden	80	26000	30,217	377,384	Slick Water	1.75	40/70 White	49,000	340,000
16	124.80	Sand-Laden	80	30000	32,715	410,099	Slick Water	2.00	40/70 White	60,000	400,000

Well Cleanout and Flowback Procedure:

- Hold Pre-job safety meeting, discuss scope of work and hazards
- Check well head pressure- bleed off pressure if any to grounded flowback tank
- MIRU 2" CT unit, PU 3 ½ " JZ bit, (Mohawk liner , 4.25"OD, RIH and DO plugs and CO to PBTD at ~ 10250'
- Circulate hole clean w/ N2 if needed
- RDMO CT unit
- MIRU PU and casing crew
- RDMO PU
- Turn well to production.
- An artificial lift procedure will be provided once flowback operations completed.