				OCD Arte	sla					
Form 3160-5 (June 2015)							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						5. Lease Serial No. NMLC064391B				
		6. If Indian, Allottee or Tribe Name								
	SUBMIT IN	TRIPLICATE - Other ins	structions on	page 2		7. If Unit or CA/. 891008501/		Name and/or No.		
<ol> <li>Type of Well</li> <li>Oil Well</li> </ol>	🛛 Gas Well 🗖 Otl	ner				8. Well Name and INDIAN HILL	l No. S UNIT 30			
2. Name of Opera	tor		DAVID STEV wart@oxy.com	VART		9. API Well No. 30-015-316	55-00-S1			
3a. Address3b. Phone No. (include area code)HOUSTON, TX 77210Ph: 432-685-5717						10. Field and Pool or Exploratory Area INDIAN BASIN-MORROW INDIAN BASIN-STRAWN				
		., R., M., or Survey Descriptio	n)	······································		11. County or Pa				
Sec 20 T218	S R24E NWSW L	ot L 1494FSL 688FWL				EDDY COU	INTY, NM			
12.	CHECK THE AI	PPROPRIATE BOX(ES	) TO INDICA	TE NATURE O	F NOTICE	, REPORT, OR	OTHER I	DATA		
TYPE OF S	UBMISSION			TYPE OF	FACTION					
🛛 Notice of I	ntent	Acidize	🗖 Dee	pen	Produc	tion (Start/Resum	e) 🔲	Water Shut-Off		
		□ Alter Casing	🗖 Hyd	Iraulic Fracturing	🗖 Reclam	ation		Well Integrity		
Subsequen	t Report	Casing Repair	—	v Construction	🛛 Recom	plete		Other		
🗖 Final Abar	donment Notice	Change Plans		g and Abandon	Tempo Water I	rarily Abandon				
If the proposal Attach the Bon following com	is to deepen direction d under which the wo pletion of the involved	Convert to Injection eration: Clearly state all pertin ally or recomplete horizontally k will be performed or provid operations. If the operation	ent details, incluc , give subsurface le the Bond No. o esults in a multip	ling estimated startin locations and measu n file with BLM/BIA le completion or reco	g date of any j red and true v . Required su ompletion in a	proposed work and a ertical depths of all ibsequent reports mu new interval, a Forr	pertinent ma 1st be filed v n 3160-4 m	arkers and zones. within 30 days ust be filed once		
testing has been	n completed. Final Al t the site is ready for f	bandonment Notices must be f	iled only after all	requirements, includ	ling reclamatio	n, have been compl	eted and the	operator has		
OXY USA W	/TP LP respectful	ly requests to recomplete	e this well in th	e Barnett shale.	This will be	// <i>3/3</i>	Mis	- Cuca		
done by cement squeezing the existing Morrow perforations, perforating the Barnett shale, stimulate by pumping 40/70 Carbolite prop using 3% KCl + slickwater system. Clean-out well using 1.25? CTU. Flow well up tubing after drill out. Monitor flowback and make sure to include sand separator in						CONSERVED TESIA DISTRICT				
See attache	d for detailed reco	ompletion procedure, WE	3D and C-102	plat.				PR 27 201		
				$\hat{C}_{\mu}$		CHED FOR "S OF APF		RECEIVER		
14. I hereby certif	y that the foregoing is	true and correct. Electronic Submission	#368391 verifie	d by the BLM We	II Informatio	n System	NOW	<u></u>		
	Con		TP LIMITED P	NRSHIP, sent to	the Carlsba	d				
Name(Printed/	Typed) DAVID SI	EWART		Title SR. RE	GULATOR	Y ADVISOR		<u> </u>		
Signature	(Electronic )	Submission)		Date 02/28/2	017					
	a.4	THIS SPACE F	OR FEDERA	L OR STATE	OFFICE U	SE				
_Approved By	hs_Wal	6		Title Eng			<u></u>	Date 1/19/17		
certify that the appli-	cant holds legal or equ	d. Approval of this notice doe aitable title to those rights in the act operations thereon.	es not warrant or ne subject lease	Office CP2	) <sup>(</sup>			,		
		U.S.C. Section 1212, make it a statements or representations a			willfully to m	ake to any departme	ent or agency	y of the United		
(Instructions on page	** BLM REV	ISED ** BLM REVISE	D ** BLM RI	EVISED ** BI M	REVISE	D ** BLM REV	ISED **			

PIP	7-11.17
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**RM OIL CONSERVATION** 

ARTESIA DISTRICT

Dattici 1 1625 N French Dr., Hobbs, NN1 88240 Phone (573) 393-6161 Fax (573) 393-0720 Dattici 11 811 S. First St., Artena, NNI 88210 Phone, (575) 748-1283 Fax: (575) 748-9720 Dattici 111 1000 Ro Brazos Road, Artee, NNI 87410 Phone: (305) J34-6178 Fax: (505) 334-6170 District IV 1220 S St. Francis Dr., Santa Fe, NNI 87505 Phone (305) 476-3460 Fax: (505) 476-3462				State of New Mexico Energy, Minerals & Natural Resources Departm OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505					- DEA		Revis	Form C-102 eed August 1, 2011 copy to appropriate District Office ENDED REPORT
			WEI	LL LC	CAT	101	AND ACR	EAGE DEDIC	ATION PLA	T	Indian 1	Basin
14	API Numbe	:र		<i>C</i> 24	<sup>1</sup> Pool	<sup>2</sup> Pool Code MIX5/55/PEIPA <sup>3</sup> Pool Name						
30-05-7	25-31655 97537 Wildrat Burnett-Shake (bas)							5)				
*Property Code *Property Name *Well Number Indian Hills Unit 30								Vell Number 30				
'OGRID	vo.						*Operator i					Elevation
192463				С	OXY USH WTP LP						r183'	
* Surface Location												
UL er let na.	Section	Townshi	p	Range	Lo	ldn	Feet from the	North/South line	Feet from the		East/West line	County
	20	215	2	.4E			1494	South	685	u	uest-	Eddy
"Bottom Hole Location If Different From Surface												
UL or let no.	Section	Townshi	P	Range Lat Ida Feet from the North/South line Feet from the			East/West line	County				
F	20	215	12	4E	. 1389 Nonth 1413' West Edd				Eddy			
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320	N											

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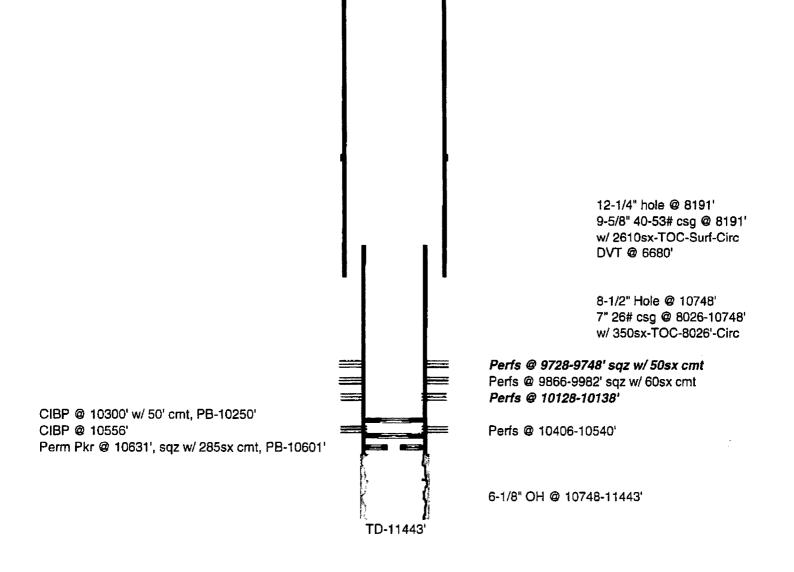
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

		"OPERATOR CERTIFICATION
		I hereby cerrify that the information contained herem is true and complete
		to the best of my know ledge and belief, and that this organization either
		owns a working interest or unleased mineral interest in the land including
385		the propried bacom bale location or best a right to dail this well at thes
<u></u>		houses pursues to a contract with an owner of such a numeral or working
		tnierest, at ta voluntary pooling agreement or a compulsory pooling
		onler beretufung entered by the unitigen
1113 PBHL - 1020'		Signature Date
1		UnuilStavent Spike, Adu. Printed Name dawid_Stavent@0xy.com Empirituation
		NEULESTANDET SKIKES, NEU.
		I TIGLED VIETNE
1		duid_Stavent@0x7.00m
		E-mail Address
		<b>"SURVEYOR CERTIFICATION</b>
		I hereby certify that the well location shown on this
		plat was platted from fleid 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.
1.680 05L		
	24 24	Date of Survey
		Signanare and Seal of Professional Surveyor
<b>%</b>		Centificate Number
and a second		

OXY USA WTP LP - Proposed Indian Hills Unit #30 API No. 30-015-31655

> 17-1/2" hole @ 1200' 13-3/8" 54.5# csg @ 1200' w/ 1250sx-TOC-Surf-Circ



# PREP- PULL EQUIPMENT

- 1. Record SITP. Ensure well is dead.
- 2. If pressure exist on well , record SITP. Calculate Kill weight Fluid confirm calculations with CE. Ensure well is dead.
  - a. Be prepared to pump 10 #brine (confirm with shut in tubing pressure)
    - b. MASP (psi) = Estimated BHP (0.48 psi/ft)) (0.11 psi) x 11,250ft)
      - i. Used 0.48psi/ft pp and tvd 11,250 ft
  - c. MASP = ~4,142 psi
- 3. MIRU Pulling Unit.
- 4. Bleed off tubing and casing pressures.
- 5. Ensure the well is dead. Kill the well if necessary with fresh water (Have 10ppg on location).
- 6. MIRU 5k lubricator
- 7. Test lubricator to 4,500psi
- 8. RIH with TWC
- 9. Bleed down lubricator
- 10. ND X/Mas tree.
- 11. Function test and Pressure test BOP as below;
  - Note: Need to function test BOP before ND anything to ensure BOP is working correctly
  - NU 5k BOP (pipe rams followed by flex rams and then annular rams on top) with 2 1/16" 5k valve with 2" 1502 WACO flange attached to valve. Perform Low test to 250 psi charted for 15 min, increase pressure to 4,500 psi and chart for 15 min on all rams. When ordering BOP s from vendors you must request that the 2 1/16" 5k valve with 1502 connection wico flange be installed prior to delivery.
  - Make sure while testing BOP's, buffer zone (20') is enforced
- 12. Retrieve TWC with dry rod and Pull out tubing hanger
- 13. RDMO lubricator
- 14. POOH with 2-3/8" tbg and BHA in stands. Ensure to scan tubing while TOOH. Replace all joints that do not scan yellow. Send scan report to engineering. Tubing will be stacked on side of location after job for reuse

# PREP- CLEAN OUT RUN/SET CBP & RUN USIT LOG

- 1. Run in hole with 6" watermelon mill for 7" 26# L-80 casing (6.151" drift) at the end of tubing to 10,200 ft. Work perforation up and down as necessary.
- 2. Ensure hole is clean
- 3. POOH with watermelon mill and tubing and record approximate amount of scale/paraffin seen
- 4. MIRU Wireline and 5K PCE.
- 5. Pressure test Lubricator to 4,500psi.
- 6. RIH with Slb USIT log to ~10,200' TVD (~50' from PBTD (10,250'))
- 7. Make 1<sup>st</sup> pass at Opsi at ~500', repeat log with Opsi on casing and log to surface. (perfs exist from 9728' to 9748')
- 8. POOH and LD logging tools and RD loggers. Ensure data is very readable before rigging down equipment.

# ISOLATE BARNETT FORMATION AND CEMENT SQUEEZE MORROW FORMATION

- 1. RIH with WLU + 7" peak CBP and set at 9,780' (32' below bottom perf)
- 2. Ensure plug is properly set, POOH with WL
- 3. RIH w/ 2-7/8" open ended WS to 9,778" (2' from CBP and 30' from bottom perf)
- 4. Establish Circulation & note if there is circulation projected to have no circulation.
- 5. If returns circulate, circulate well clean
- 6. Do not exceed 2200psi squeeze pressure unless specified otherwise.
- 7. Call out SLB cement crew (6 hr notice for crew- It is recommended to give a minimum of 24 hr notice to preload and test cement to prevent delays):
  - a. Each job requires 50 sk of cement including dead volumes. Call out for 2 jobs worth of material (100 sacks).
- 8. Verify all loaded volumes, thickening times, required equipment and KSQR compliance prior to starting job
- 9. Conduct on location JSA with SLB, client and rig personnel. VERIFY Maximum Surface Pressure (6,900 psi)
- 10. MIRU SLB Equipment including HP squeeze manifold.

- 11. Test lines to 3000 psi.
- 12. SLB to verify if there is circulation and record before cement treatment.
- 13. Balanced Plug 1 for Squeeze (9,728'-9,748')- (MASP during plug placement = 2,500psi):
  - a. Pump 10 bbls Gel water @ 3 bpm (Mandatory to prevent PressureNET from contacting Newtonian fluid)
  - b. Pump ~12.7 bbls (50sks) 14.8 ppg PressureNET squeeze slurry @3 bpm. Density is critical parameter batch cement on pump prior to going down hole.
  - c. Displace with 4 bbls Gel water @ 3 bpm (Mandatory to prevent PressureNET from contacting Newtonian fluid)
  - d. Displace with rig water to balance plug accordingly. Monitor and record rate pressure and returns.
- 14. Pull to 200' over TOC (9,528') and reverse circulate tubing clean (2 tubing volumes).
- 15. If hole staying full: Close annular down squeeze immediately @ 0.5-1 bpm for a maximum of ~9 bbl.
- 1<sup>st</sup> attempt: If maximum pressure of 2,500 psi is not achieved after 6.5bbls has been squeezed away, begin 10 minute hesitations and displace +/-1 bbl between hesitations. If cement is over displaced into formation with no luck on hesitations wait 4-8 hr (minimum time for cement to 50 psi + 2 hr based on UCA). Execute squeeze treatment again
- b. 2<sup>nd</sup> attempt: If maximum pressure is not achieved after 6.5bbls of total volume has been squeezed away, begin 10 minute hesitations and displace +/-1 bbl between hesitations. If maximum pressure is not achieved before 10bbls is displaced shut down and WOC.

# c. If maximum pressure of 2,500 psi is achieved during these 10 bbl, continue to increase pressure until 10 bbls are pumped or maximum pressure is maintained.

If hesitation is successful leave pressure & WOC overnight (at least 12 hr).

- -When RIH to drill out cement ensure to maintain circulation the entire time to prevent sticking.
- Follow recommended pumping rates and 0.2 ppg slurry density tolerance.
- Maximum shut down time is 15 minutes (during placement) unless otherwise stated.

- Calculate maximum shut down time by \*\*\* (Thickening time) - (Pump time before failure) - (Time to circulate out cement from the well) (approximately 1 Hour) \*\*\*

- 16. Pressure test casing to 500psi and ensure it sustains pressure before commencing.
- 17. RIH with 2-7/8 WS, 6" JZ bit & (spiral drill collars if needed) and tag TOC at ~ 9,528'
- 18. Drill through cement at ~9528' and CBP at 9,778'
- 19. Tag PBTD at  $^{\sim}$  10,250' and circulate hole clean
- 20. POOH with 2-7/8 WS and BHA
- 21. Pressure test casing to 500psi for 5mins (report findings to CE)
- 22. RDMO SLB Cement

# SET PERMANENT PACKER AND 4-1/2" FRAC STRING

- 1. RIH w/ 2-7/8" tbg and 7" x 4-1/2" globe permanent packer
- 2. Set permanent packer at 10,030' (~100' from zone of interest) with 15# of compression.
- 3. Ensure permanent packer is properly set and unlatch On/Off overshot and circulate full wellbore volume of kill fluid
- 4. POOH w/ 2-7/8" tubing and LD on/off overshot
- 5. RIH with 4-1/2" 13.5# P-110 DQX frac string and latch onto on/off on packer (ensure to circulate packer fluid before latching).
- 6. Pressure test casing to 1,000psi for 15mins and ensure packer holds
- 7. Pressure test tubing to 9,500psi (80% of burst) for 15mins and chart test.

# **PREP- PERFORATING BARNETT FORMATION**

- 1. MIRU WL and 5K PCE
- 2. RIH with WL and 3-1/8" gun , 21.5g charge, 60 degree phasing and 4spf (40 holes)
- 3. Perforate holes from 10,128' 10,138'.
- 4. POOH with WL and gun carrier
- 5. ND BOP
- 6. RDMO Pulling Unit
- 7.

#### FRAC STACK PRESSURE TEST PROCEDURE

- 1. NU 7-1/16" 10K Hand Wheel Operated master frac valve
- 2. Ensure LMV is closed
- 3. Ensure Frac tree assembly is properly assembled and ready to be installed
  - a. 7-1/16" 10k x 4 1/16" 10k flow cross assembly
  - b. 7-1/16" 10k goat head assembly and 7-1/16" 10k crown valve with H.P. wireline cap
- 4. Clean ring groove and install ring gasket
- 5. Lower frac tree assembly to a LMV, be sure the valve is properly aligned
- 6. Prior to removing the sling off the frac tree, install the nuts onto the pad studs to secure the assembly
- 7. Tighten all connections and ensure the ring gasket is evenly compressed
- 8. Close upper HV prior to moving the lifting device
- 9. Mark all valves with proper number of turns
- 10. Monitor HV both open and closed for any hydraulic leaks
- 11. Check all body greasing fittings
- 12. Make sure all valves are open with exception of the LMV
- 13. Ensure LMV is closed
- 14. Close outside wing valve at the flowcross
- 15. Nipple up MIT unit to the wing valve
- 16. When all air has been bled from the frac tree, close the needle valve on top of the flow cross
- 17. Perform low 250 psi test for 15 minutes
- 18. After successful test, bleed off everything to zero
- 19. Perform high 9500 psi test for 15 minutes
- 20. After successful test, bleed off everything to zero
- 21. Be sure to open all valves to ensure all pressure is bled off
- 22. ND MIT unit
- 23. Retrieve 2-way check and close all valves

# DFIT

The purpose of the DFIT is to estimate breakdown pressure, closure pressure, pore pressure, and formation permeability.

- 1. Check location for any hazards.
- 2. MIRU pumping equipment and data acquisition instrumentation. Verify all requirements have been completed to open the toe-initiation sleeve and perform injection into the well.
  - Secure high pressure lines and restrict the area to essential personnel only.
  - Test the pop-off valve on the pump to prevent over-pressuring the production casing.
  - Have clean, inhibited fresh water available to complete the casing test and injection test.
  - Install redundant casing valves to allow the pump-in line to be disconnected and removed at the end of the injection test.
  - Install the memory surface gauge. \*Please read notes and recommendations from RDS (Reservoir Data Systems) in the appendix below. Verify the gauge is programmed to record the casing test, opening the toe-initiation sleeve, injection test and the minimum 15-day duration of the DFIT.
  - Car Seal Open the valve(s) between the memory surface gauge and the wellbore to prevent it from being inadvertently closed.
  - Install a digital flow meter to record all volumes and rates.
  - Verify the memory surface gauge and flowmeter are recording accurate data.
- 3. If separate pumps are used to test the casing and perform the DFIT injection test, ensure the pump-in lines are connected to a manifold to enable the injection test to be performed immediately after the toe-initiation sleeve is opened.
- 4. Completely load the pump-in lines and the well with fluid. Verify there are no air pockets in the system.
- 5. Test the pump-in line to the casing-test-pressure against the closed inside casing valve on the production casing.
- 6. Actuate the toe-initiation sleeve and test the production casing as per the completion program.
  - a. Open the casing valve for the intermediate casing and monitor for leaks during all pumping operations. After completing the DFIT injection, close the casing valve and install a pressure gauge.

- 7. Immediately after the sleeve has opened, perform the DFIT injection:
  - a. Break down the formation and establish injection at 3 to 5 bpm.
  - b. Maintain a stable injection rate for a total of 10-15 bbls.
  - C. After pumping 10-15 bbls, shut down the pump.
  - d. Do not pump more than 15 bbls of fluid.
  - e. Do not step down injection rates.
  - f. At the end of injection, do not flowback, bleed off pressure or inject into the well. This will corrupt the data.
- 8. If pumping stops for any reason (operation, leaks, etc.) use the following as a guideline:
  - a. If pumping stops for less than 30 seconds AND less than 5 bbls have been pumped, restart injection and finish pumping the planned fluid volume.
  - b. If pumping stops for less than 30 seconds AND more than 5 bbls have been pumped, do not re-start injection.
  - c. If pumping stops for more than 30 seconds AND less than 5 bbls have been pumped, wait at least 2 hours and re-start (repeat) the DFIT injection test using the original planned volumes.
  - d. If pumping stops for more than 30 seconds AND more than 5 bbls have been pumped, do not restart injection.
- 9. If there is any doubt regarding a re-start of injection, do not restart, but wait 2 hours and repeat the test from the beginning.
- 10. Close the inside and outside casing valves to isolate the pump-in line. Bleed pressure from the line, and disconnect the pump-in lines. RD and MOL pumping equipment.
- 11. Record SIWHP for a minimum of 14 days.
- 12. Report the following:
  - a. Type and density of fluid resident in the production casing at the beginning of the test.
  - b. Type and density of fluid injected to test the casing and perform the injection test.
  - c. Causes or observations regarding pressure spikes or leaks during the test.
  - d. Recorded pressure and rates in ASCII or CVS file.
  - e. Report all rates, pressures, and well open/close times to the completion engineer to allow correlating gauge and flow meter data.
  - f. Notify the completion engineer once the injection is completed and the well is shut in.

# PERFORATE AND FRAC

• Pressure and Rates

CATEGORY	PRESSURES (PSI)				
Max Allowable Pressure	9,500				
Max Pressure	8,900				
Global Kick Outs	9,000				
Pop Offs	9,200				
Test lines	9,500				
Expected Treated Pressure	8,500				

- \*depending on casing grade and limitation
- Prejob QA/QC
  - Sand sieve analysis on location
  - Water analysis, gel compatability and viscosity verification

-Combo Dichlor/DDAC biocide treatment for water. No more than 1 ppm residual at frac tanks.

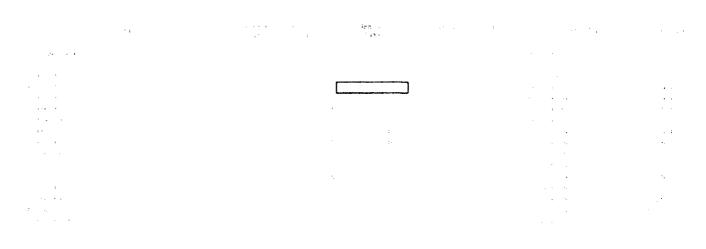
- Ensure crosslink achieved in required duration
- Rheology gel analysis (break test) in lab
- Review Drilling Handover for hardline depths and RSI depths
- Before starting any stage
  - Verify sand type, volume and SGU prior to every stage
  - Verify number of required pumps in line and 2 backup pumps on location

- Must have 1 blender rig up or on location
- Working satellite connection with remote monitoring operational
- Send email updates before and after each stage
- Confirm with manifold personnel, valves are in the correct open/closed position for the pertinent stage
- Verify functionality of the PRV and test documentation
- Communicate with wireline on status of perforation operations
- During each stage
  - Attempt to achieve as high of a rate as possible (design calls for 80 bpm).
  - Calibrate densitometer during pad
  - Flush to top perf, plus 20 bbls. Call flush at 0.2ppg on the in-line densitometer
  - Monitor production and intermediate annuli pressure.
- After each stage
  - Have Frac engineer send csv file, post stage reports, WTSML and EOWR to completions engineers

#### STIMULATION PROCEDURE:

- 1. MIRU stimulation equipment. Ensure high pressure lines are properly secured and that the area is restricted to essential personnel only.
- 2. Pressure test lines, hydraulic pop-off valve(s), global pump kick-outs to pressures in the aforementioned table.
- 3. Stagger electronic kick-outs at 50 100 psi increments below the global kick-out. Verify the lowest kick-out is greater than the estimated treating pressure.
- 4. Do not exceed Max Pressure during active pumping.
- 5. Prior to frac, ensure that Computer van is monitoring all rates and pressures accurately
- 6. Review the frac treatment schedules. Execute the appropriate Frac schedule for the current stage:
- 7. Be prepared to modify pump schedule as needed
- 8. After dropping ball on surface (to seat on already set plug), immediately pump acid to ensure that the bottom perforations are adequately broken down.
- 9. Break down the perforations.
- 10. Use rate diversion for acid stages, increasing rate in ~5 bpm increments as pressure break-back dictates until the design treatment rate is achieved.
- 11. Monitor pressures to avoid high-rate screen out events.
- 12. Flush Procedure When the in-line densitometer proppant concentration falls to 0.2 ppg, pump a 20 bbl Slickwater spacer then mark flush. Flush with slick water to the top perforation depth. This should over-flush the 20 bbls spacer into the perforations. Shut down and record ISIP and F.G. Shut in the well and prepare for pump down perforating. Report the following pressures for each stage: Break down pressure, ISIP, and estimated F.G.
- 13. Shut in pressure and shut-in time when the well is opened for the pump down perforating run.
- 14. Screen-out Guideline: If screen out leaves excessive proppant in the wellbore, flowback the well. Do not exceed 4,320 bpd (~5-8 bpm). Once proppant has been unloaded, flowback one additional casing volume to verify the casing is clean. Establish injection rate and displace 100 vis sweep to the perforations to clean the wellbore for the following stage.

STIMULATION TREATMENT PUMP SCHEDULES



# BUREAU OF LAND MANAGEMENT Carlsbad Field Office 620 East Greene Street Carlsbad, New Mexico 88220 575-234-5972

# Permanent Abandonment of Production Zone Conditions of Approval

Failure to comply with the following Conditions of Approval may result in a Notice of Incidents of Noncompliance (INC) in accordance with 43 CFR 3163.1.

1. Plug back operations shall commence within <u>ninety (90)</u> days from this approval. If you are unable to plug back the well by the 90<sup>th</sup> day provide this office, prior to the 90<sup>th</sup> day, with the reason for not meeting the deadline and a date when we can expect the well to be plugged back. Failure to do so will result in enforcement action.

2. <u>Notification:</u> Contact the appropriate BLM office at least 24 hours prior to the commencing of any plug back operations. For wells in Eddy County, call 575-361-2822. For wells in Lea County, call 575-393-3612

3. <u>Blowout Preventers</u>: A blowout preventer (BOP), as appropriate, shall be installed before commencing any plugging operation. The BOP must be installed and maintained as per API and manufacturer recommendations. The minimum BOP requirement is a 2M system for a well not deeper than 9,090 feet; a 3M system for a well not deeper than 13,636 feet; and a 5M system for a well not deeper than 22,727 feet.

4. <u>Mud Requirement:</u> Mud shall be placed between all plugs. Minimum consistency of plugging mud shall be obtained by mixing at the rate of 25 sacks (50 pounds each) of gel per 100 barrels of **brine** water. Minimum nine (9) pounds per gallon.

5. <u>Cement Requirement</u>: Sufficient cement shall be used to bring any required plug to the specified depth and length. Any given cement volumes on the proposed plugging procedure are merely estimates and are not final. Unless specific approval is received, no plug except the surface plug shall be less than 25 sacks of cement. Any plug that requires a tag will have a minimum WOC time of 4 hours.

In lieu of a cement plug across perforations in a cased hole (not for any other plugs), a bridge plug set within 50 feet to 100 feet above the perforations shall be capped with 25 sacks of cement.

Before pumping cement on top of CIBP, tag will be required to verify depth. Based on depth, a tag of the cement may be deemed necessary.

Unless otherwise specified in the approved procedure, the cement plug shall consist of either **Neat Class** "C", for up to 7,500 feet of depth or **Neat Class** "H", for deeper than 7,500 feet plugs.

6. <u>Subsequent Plug back Reporting</u>: Within 30 days after plug back work is completed, file one original and three copies of the Subsequent Report, Form 3160-5 to BLM. The report should give in detail the manner in which the plug back work was carried out, the extent (by depths) of cement plugs placed, and the size and location (by depths) of casing left in the well. <u>Show date work was completed</u>. If plugging back to a new zone submit a Completion Report, form 3160-4 with the Subsequent Report.

7. <u>Trash</u>: All trash, junk and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.