#### District I

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Phone: (505) 334-6178 Fax: (505) 334-6170 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

# $HOBBSOC_D^{Energy}$ Minerals and Natural Resources

**Oil Conservation Division** 

**State of New Mexico** 

☐ AMENDED REPORT

Revised November 14, 2012

Form C-101

AUG 01 2013

1220 South St. Francis Dr.

**Santa Fe, NM 87505** 

RECEIVED

APPL	ICATIO	N FOR	PEI	RMIT T	O DF	RILL,	, RE-EN	TER,	DEEPEN	I, PLI	JGBAC	K, OR	ADD	A ZONE
APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, F  1. Operator Name and Address 2. CHEVRON U.S.A. INC. 3. 15 SMITH ROAD 4. MIDLAND, TEXAS 79705								OGRID Number 4323						
!			٦.	MIDEAIVE	, 115771	3 17100	,					3. API N 30-025-		/
* Property Code Property N H.T. MATTERN								lame I NCT-B		<u></u>			6. Wel	
	- <del></del>	<u>V /5</u>					urface Lo					•	-	
UL - Lot G	1 1 1			-	Lot Idn		Feet fro	om	N/S Line ORTH	Fe	eet From 2310	E/W Line EAST		County
		<u> </u>	1	· · · · · · · · · · · · · · · · · · ·	*. <b>I</b>	Propos	ed Bottor	n Hole L	ocation	ı		1_,		
UL - Lot	UL - Lot Section Township			Range		Lot Idn		om	N/S Line	Fe	eet From	E/W Li	ne	County
	<u> </u>	<u></u>			I	9. <b>p</b>	ool Infor	mation						
					BLIN	Poo	ol Name IL & GAS (C			·				Pool Code 6660
L					A	dditio	nal Well I	nformat	ion				]	
	ork Type MPLET	F	12.	Well Type OIL			13. Cable/R				14. Lease Type		15. Ground Level Elevation 3481	
	Multiple		<sup>17.</sup> Pr	oposed Depth 6772'		BLINE	18. Forma EBRY	tion		<sup>19.</sup> Cont	*Contractor 20. Spud Da		Spud Date	
Depth to Gro	ound water			Dista	nce fron	nearest	fresh water	well			Distance	to nearest s	urface w	/ater
				21.	Propo	sed C	asing and	Cement	Program					
Туре	Но	le Size	Casi	ing Size		asing W		1	tting Depth		Sacks of	Cement		Estimated TOC
					NC	CH.	ANGE							
							<u>.</u>							
	1		70.7	Casin	g/Cen	nent P	rogram: A	Addition	al Comme	nts				
	Dee	au	uc	hed (	Paq	ge	ZOL)	(XD)	sea l	UDK	) DA	aten	vu	<i>T</i>
				22.	Propo	sed Bl	owout Pr	evention	Program			,		
Type Working Press			Pressur	re		Test Pr	Pressure Manufactu		ufacturer					
<sup>23.</sup> I hereby o	certify that t	he informati	on giv	en ahove is t	rue and	complet	te to the					•		
best of my k	nowledge a	nd belief.				-			OII	L CON	ISERVA'	TION D	VISI	ON
19.15.14.9 ( Signature:				mse	E TON	MAC L	_ and/or	Approve	d By:		The state of the s	) Lesso		-
Printed name: DENISE PINKERTON					Title: Petroleum Engineer									
Title: REGULATORY SPECIALIST						Approved Date: 08/09/13 Expiration Date: 08/09/16								
E-mail Addı	ress: <u>leakej</u>	l@chevron.c	om								• • • •			
Date: 07/17/2013 Phone: 432-687-7375						Conditio	ns of Approva	ıl Attach	ed					

DURING THIS PROCEDURE WE PLAN TO USE THE CLOSED LOOP SYSTEM WITH A STEEL TANK AND HAUL TO THE REQUIRED DISPOSAL, PER THE OCD RULE 19.15.17

Mattern B #21 Blinebry Oil & Gas, Blinebry Reservoir T21S, R37E, Sec. 31 N 32° 26' 10.212", W -103° 12' 2.304" (NAD27)

Job: PB to Blinebry and Frac

## PREWORK:

- 1. Utilize the rig move check list.
- 2. Check anchors and verify that pull test has been completed in the last 24 months.
- 3. Ensure location of & distance to power lines is in accordance with MCA SWP. Complete and electrical variance and electrical variance RUMS if necessary.
- 4. Ensure that location is of adequate build and construction.
- 5. Ensure that elevators and other lifting equipment are inspected. For wells to be worked on or drilled in an H<sub>2</sub>S field/area, include the anticipated maximum amount of H<sub>2</sub>S that an individual could be exposed to along with the ROE calculations for 100 ppm and 500 ppm.
- 6. Review JSA and hazards with rig crew. Visually inspect wellhead, casing and tubing valves. Decide whether tubing and casing valves can be used; replace as needed.
- 7. Scout location and mark off anything that might be hazardous to daily operations.

# Reminders:

- 8. Caliper all lifting equipment at the beginning of each day or when sizes change. Note in JSA and record on Elevator Change-out Log when and what items are callipered.
- 9. When NU anything over an open wellhead (BOP, EPA, etc.) ensure the hole is covered to avoid dropping anything downhole.
- 10. Ensure well is secure/shut in with blind rams between job stages (nothing in well).
- 11. If pumping any cement, plugging back a well or changing producing intervals, always contact the OCD and give the details.
- 12. Hold safety meetings with all personnel on location prior to any major or abnormal operation.

# Procedure:

This procedure is meant to be followed. It is up to the WSM, Workover Engineer and Production Engineer to make decisions necessary to SAFELY do what is best for the well. In the extent that this procedure does not reflect actual operations, please contact WE, PE and Superintendent for MOC.

NOTE: Schedule Dickey Analytical to be present at Frac. (432-553-2526)

- 1. MIRU workover unit. Verify that well does not have pressure or flow. If well has pressure, note casing and tubing pressures on Wellview report. Bleed down well. Contact WE if well won't bleed down.
- 2. Unseat pump, POOH with rods and pump laying down all rods if the rig will be moving off. Examine rods for wear/pitting/paraffin. Do not hot water unless necessary. ND wellhead, unset TAC, NU BOP dressed with 2-3/8" pipe rams on top and blind rams on btm. NU EPA equipment & RU floor. POOH and LD 1 jt 2-3/8" tbg. PU 5-1/2" packer (Note: production csg shows 14# and 17# K55 mixed) along with a joint of 2-3/8" tubing and set below WH @ ~25'. Test BOP pipe rams to 250 psi/1000 psi. Note testing pressures on Wellview report. Release and LD packer.
- 3. POOH while scanning 2-3/8" prodn tubing. (TAC 6408', Perfs 6,481-6691', EOT 6,697, PBTD 6,736'). LD all non-yellow band joints.

Note: Strap pipe out of the hole to verify depths and note them on Wellview report. Send scan log report to <a href="EAUI@chevron.com">EAUI@chevron.com</a>.

4. MIRU wireline unit. **Set up exclusion zone around WL unit.** R/U lubricator and test to 1000 psi against blind rams. RIH with 4.625" gauge ring to 6430' to make sure well is free of obstructions. Note in WV and

contact WE if gauge ring sets down, drags, or hangs up inside 5-1/2" csg. If gauge run was clear, RIH with 5-1/2" CIBP and set @ 6415'. PU and set down on CIBP to ensure it set. RIH with dump bailer and dump 35' of cmt on top of CIBP. POOH, fill up csg and test down to CIBP to 250/1000 psi. (Record csg test in WellView in time log and safety/inspections). Notify WE if pressure doesn't hold.

- 5. If CIBP/csg tested good to 250/1000 psi, continue to step #6. If test failed, PU 5-1/2" packer and TIH to top of CIBP. Set pkr and test again to 250/1000 psi. Test backside to 250/1000 psi. Notify WE after establishing which direction leak-off is occurring.
- 6. PU 5-1/2" RBP and RIH on 2-7/8" 6.5# L-80 WS. Set RBP at 6000'. Release from RBP and spot 750 gals of 10% acetic acid across proposed perfs 5487' 5942'.
- 7. POOH with 2-7/8" WS and dump 300 lbs of sand on top of RBP. Allow 1-2 hrs for sand to settle onto RBP (Plan for EOD if possible).
- 8. MI & RU Baker Electric Line unit. Set up an exclusion zone and establish radio silence when running perf guns. Install Lubricator and test to 250/1000 psi against blind rams. GIH with 3 3/8" RHSC Gunslinger casing guns (0.42" EH & 47" penetration) and perforate from 5,487-94', 5,500-5,510', 5,516-5,523', 5,529-5,539', 5,546-5,557', 5,586-5,599', 5,609-5,917', 5,620-5,626', 5,633-5,643', 5,648-5,655', 5,662-5,674', 5,678-5,690, 5,695-5,701', 5,785-5,791', 5,834-5,843', 5,867-5,873', 5,894-5,901', and 5,934-5,942 with 3 JSPF at 120 degree phasing, using 32 gram premium charges. POOH. RD & release electric line unit. Note: Reference Welex Gamma-Collar Perforation Record Log dated 1.5.1976 (attached).
- 9. MIUL & strap ~172 jts 3 ½" 9.3# L80 tbg as frac string. Change out pipe rams to 3 ½". PU 5 ½" testing packer on one joint 3 ½" tubing and set @ ~25'. Test BOP pipe rams to 250/1000 psi. Note testing pressures on WellView report (Time log and safety/inspections). Release and LD packer.
- 10. PU and GIH w/ 5-1/2" Arrow-Set 10K pkr & On-Off tool w/ frac hardened 2.25" "F" profile, blast joint, and 3 ½", 9.3# 8RD L-80 work string, testing to 8000 psi. Set pkr at approximately ~5,400'. Install 10k frac valve and test 3-1/2" connection to 8000 psi with hydrotesters. Install goat head above FV. Pressure 3-1/2" x 5 1/2" annulus to 500 psi to test csg and pkr. Leave pressure on csg during frac job to observe for communication.
- 11. RDMO pulling unit. Schedule Dickey Analytical to be present at Frac. 432-553-2526
- . 12. MI & RU DS Services. **Set up exclusion zone around stimulation unit & surface treating lines.** Frac well down 3 ½" tubing at **40 BPM** with 2,000 gals 2% KCl, 4,000 gals 15% HCl, 94,000 gals of Viking 3000, 8,000 100 mesh white, 176,000 lbs. 16/30 mesh white, and 30,000 lbs **resin-coated** Super LC 16/30 mesh. Observe a maximum surface treating pressure of **6400 psi**. Pump job per attached Baker frac design.

#### PROCEDURE

	Fluid		Proppant						
Stage	Туре	Volume (gal)	Conc. (ppa)	Туре	Stage (lbs)	Cum (lbs)			
1	2% KCI Water	2000		Spacer					
2	15% HCI	4000		Spacer					
3	Viking 3000	6000		Pad	í (				
4	Viking 3000	8000	1.000	100%Sand, White, 100 m	8000	8000			
5	Viking 3000	6000		Pad		8000			
6	Viking 3000	14000	0.500	100%Sand, White, 16/30	7000	15000			
7	Viking 3000	12000	1.500	100%-Sand, White, 16/30	18000	33000			
8	Viking 3000	12000	2.500	100%Sand, White, 16/30	30000	63000			
9	Viking 3000	14000	3.500	100%Sand, White, 16/30	49000	112000			
10	Viking 3000	16000	4.500	100%Sand, White, 16/30	72000	184000			
11	Viking 3000	6000	5.000	100%SuperLC, 16/30	30000	21 4000			
12	30# Linear Gel	2053		Flush		214000			
Total		102053				214000			

#### TREATMENT SCHEDULE

Surface Rates			Volume .				Stage		
ŀ	Treating	Slurry Clean		Prop. Rate	Siurry		Fluid		Pump
Stage	Pressure (psi)	(bpm)	Fluid (bpm)	(lb/min)	Stage (bbls)	Cum. (bbls)	Stage (bbls)	Cum. (bbls)	Time hh:mm:ss
1	2773	6.0	6.0		47.6	47.6	47.6	47.6	00:07:56
2	5043	20.0	20.0		95.2	142.9	95.2	142.9	00:04:45
3	6051	40.0	40.0		142.9	285.7	142.9	285.7	00:03:34
4	5936	40.0	38.3	1606.8	199.2	484.9	190.5	476.2	00:04:58
5	6051	40.0	40.0		142.9	627.7	142.9	619.0	00:03:34
6	5998	40.0	39.1	821.4	340.9	968.6	333.3	952.4	00:08:31
7	5872	40.0	37.5	2359.9	305.1	1273.7	285.7	1238.1	00:07:37
8	5731	40.0	35.9	3773.4	318.0	1591.7	285.7	1523.8	00:07:57
9	5586	40.0	34.5	5076.5	386.1	1977.8	333.3	1857.1	00:09:39
10	5441	40.0	33.2	6281.7	458.5	2436.3	381.0	2238.1	00:11:27
11	6358	40.0	32.5	6826.8	175.8	2612.0	142.9	2381.0	00:04:23
12	4957	40.0	40.0		48.9	2660.9	48.9	2429.8	00:01:13

- Total Pump Time: 01:15:39
- 13. Flush to 5,487' <u>Do not overflush.</u> Shut well in. Record ISIP, 5, 10, and 15 minute SI tbg pressures. SWI. RD & Release Baker Services. <u>Leave well SI overnight.</u>
- 14. Flowback well starting 24 hours after the frac. Open up at 20 bph and work up to 50 bph over the first 6 hours. Flow down until the well dies putting flowback down the flowline if possible. Consult with the pumper and OS if flowback is sent down the flowline.
- 15. MIRU pulling unit. Test 3 1/2" pipe rams to 500 psi against packer.
- 16. ND frac valve, release packer, and circulate kill weight fluid. POOH laying down 3-1/2" frac string and LD 5-1/2" packer.
- 17. Close blind rams. Change 3  $\frac{1}{2}$ " pipe rams to 2  $\frac{7}{8}$ ". Open blind rams. PU/RIH and set 5  $\frac{1}{2}$ " 14-17# rated packer @ ~ 25' to test 2  $\frac{7}{8}$ " pipe rams to 250/1000 psi. Release and LD packer.
- 18. PU and GIH with 4-3/4" MT bit on 2-7/8" work string and clean out to top of RBP at approximately 6,000' using 8.6 PPG cut brine water and air unit if necessary (continue to supplemental procedure and in accordance with attached SOG). POOH with 2-7/8" work string and bit. LD bit.
- 19. RIH with RBP retrieval tool on 2-7/8" 6.5# L-80 WS to pull RBP at 6000'. Wash down through any remaining sand and latch onto RBP. POOH with 2 7/8" 6.5# L-80 WS. LD RBP.

- 20. PU & GIH with 5-1/2" pkr on 2-7/8" WS. Set pkr at 5,450'. Open well. GIH and swab well until there is no sand inflow. Report recovered fluid volumes, pressures, and/or swabbing fluid levels. Release pkr. POOH LD 2 7/8" work string and pkr.
- 21. RIH with 2-7/8" production tubing hydrotesting to 6,000 psi. Set TAC per ALCR recommendation. ND BOP. NU WH. RIH with rods and pump per ALCR. Hang well on. RD and release workover unit.
- 22. Turn well over to production.

### **FOAM / AIR CLEANOUT PROCEDURE**

- This procedure is an addition to the original procedure.
  - 1. Install flowback manifold with two chokes. All components on flowback manifold must be rated to at least 5,000 psi. If possible, flowback manifold components should be hydrotested before delivery. Hardline pipes from 2" casing valve to manifold to half pit with gas buster. Set up an exclusion zone around flowback line.
  - 2. Install flowback tank downwind from rig.
  - 3. Position Air unit upwind from Rig next to water tanks. Have vacuum truck on standby to empty halfpit. (if needed)
  - 4. RIH with 4 3/4" MT bit, 4 (3-1/2") drill collars on 2-7/8" 6.5# L-80 WS.
  - 5. NU stripper head with <u>NO Outlets</u> (Check stripper cap for thread type course threads preferred). **Stripper head to be stump tested to 1,000 psi before being delivered to rig.** Check chart or test at rig.
  - RU foam air unit. Make quality foam on surface before going down hole with foam/air. Install flapper float at surface before beginning to pump. Break circulation with foam/air. Evacuate fluid from well.

Pump high quality foam at all times. Do not pump dry air at any time. Fluid injection rates will generally be above 12 gallons per minute

Whenever there is pressure on the stripper head, have a dedicated person continuously monitor pressure at choke manifold and have a dedicated person at accumulator ready to close annular BOP in case stripper leaks. Do not allow pressure on stripper head to exceed 500 psi. If pressure cannot be controlled below 500 psi, stop pumping, close BOP and bleed off pressure.

- 7. Clean out fill to 6,000' with low RPM's rotation and circulation, always keep pipe moving. Short trips can be beneficial to hole cleaning. Circulate well clean for at least 1 hour at the end of the day and pull up above the perforations before shut down for night. If the foam/air unit goes down, pull above the perforations.
- 8. When tripping out of hole, have special float bleed off tool available to relieve trapped pressure below float.

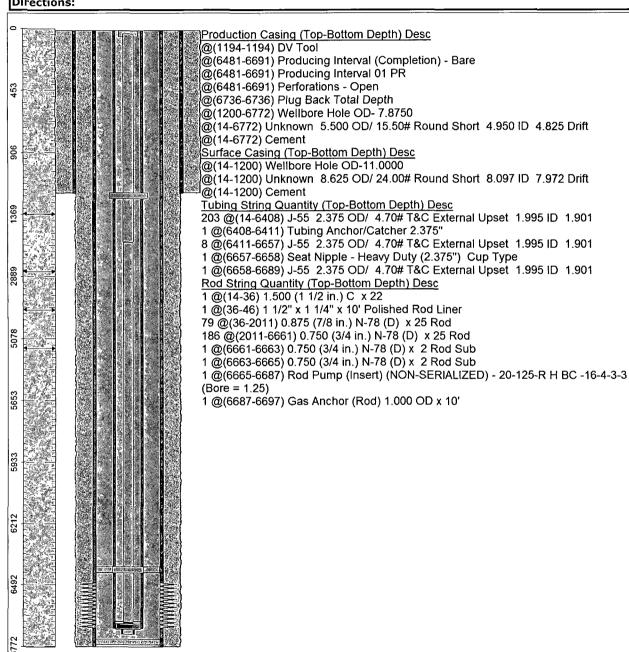
Ensure that high quality, stiff foam is pumped while circulating the fill. Stiff foam is required to prevent segregation while circulating. Monitor flow and pressures carefully when cleaning out.

Before rigging up power swivel to rotate, carefully inspect Kelly hose to ensure that it is in good condition. Ensure that swivel packing is in good condition.

Continue on with original procedure for completion.

# Chevron U.S.A. Inc. Wellbore Diagram: MATB21

Lease: OEU EUNICE	Well No.: MATTERN H T /NCT-B/ 21	Field: DRINKARD				
Location: 2310FNL2310FEL	Sec.: N/A	Blk:	Survey: N/A			
County: Lea St.: New Mexico	<b>Refno:</b> E07652	<b>API:</b> 3002525165	Cost Center: UCU415000			
Section: 31	Township: 021 S		Range: 037 E			
Current Status: ACTIVE		Dead Man Anchors Test Date: 05/03/201				
Directions						



Ground Elevation (MSL):: 3481.00	<b>Spud Date:</b> 12/12/1975	Compl. Date: 01/08/1975
Well Depth Datum:: CSI0000N	Elevation (MSL):: 3495.00	Correction Factor: 14.00
Last Updated by: fitecl	Date: 02/19/2013	

Field: Blinebry Oil and Gas

Well: H. T. Mattern (NCT-B) #21

Reservoir: Blinebry

6/6/2013 By: John Taxiarchou

TD: 6772'