Form 3160-3 (August 2007) RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND, MANAGEMENT

JAN 19 2011

FORM APPROVED OMB No. 1004-0137 Expires July 31, 2010

5. Lease Serial No. NM 070361

BUREAU OF LAND MANAGEMENT Farmington Field Of The Name APPLICATION FOR PERMIT TO DRILL OR REENTER and Management Indian, Allotee or Tribe Name

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la. Type of work: DRILL REENTI	ER			7 If Unit or CA Ag Canada O		ne and No.
U. T. ANN. MANUEL CANAL COLOR	[7]			8. Lease Name and		
Ib. Type of Well: ✓ Oil Well Gas Well Other	<u> </u>	ngle Zone Multi	ole Zone	# 46Y	·	
2. Name of Operator Benson-Montin-Greer Drilling Co.	rporation			9. API Well No.	39-3	1016
3a. Address 4900 College Blvd		. (include area code)		10. Field and Pool, or	r Exploratory	
Farmington, NM 87402	(505) 325-	8874		Puerto Chio	uito Manc	os West
4. Location of Well (Report location clearly and in accordance with an	ty State requirem	ents.*)		11. Sec., T. R. M. or	Blk. and Surv	ey or Area
At surface 449' FSL and 281' FEL, Unit P				Sec 27, T 25	5N, R 1W	
At proposed prod. zone (Same)						
14. Distance in miles and direction from nearest town or post office* approximatly 4 miles north and 5 miles east of Lindrith, NN	Λ			12. County or Parish Rio Arriba		13. State NM
15. Distance from proposed*	16. No. of a	erec in leace	17 Spacin	g Unit dedicated to this	well	
location to nearest			17. Sphoni	g Unit dedicated to this	CVD JAN	26 11
property or lease line, ft. (Also to nearest drig. unit line, if any)	480.0	00	64	o ()	IL CONS	i. DIV.
18. Distance from proposed location* +/- 2900 ft.	19. Proposed	d Depth	20. BLM/E	BIA Bond No. on file	0707	
to nearest well, drilling, completed, 47-2900 ft. applied for, on this lease, ft.	7550'		NM 0092		DIST.	ថ
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approxim	mate date work will sta	rt*	23. Estimated durati	on	
7296 GL		1	3 weeks			
	24. Attac	chments				
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office). 		Bond to cover t Item 20 above). Operator certification.	he operation	ormation and/or plans	J	,
25. Signature	Name	(Printed/Typed)			Date	
Jan Land	Loren	Diede			01/17/20	011
Drilling and Completions						
Approved by (Signature)	Name	(Printed/Typed)			Date 2/	5,12
Title AFM	Office	FFO			1 - / -	
Application approval does not warrant or certify that the applicant hold	ls legal or equi	table title to those righ	ts in the sub	ject lease which would	entitle the ap	plicant to
conduct operations thereon. Conditions of approval, if any, are attached.					•	
Fitle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a cultitates any false, fictitious or fraudulent statements or representations as	to any matter w	vithin its jurisdiction.	-	ake to any department	or agency o	f the United
(Continued on page 2) APPROVED BY TH LOOP SYSTEM	IE NMOCD FO 1, BELOW GR	SUBMITTED TO AND DR: A PIT, CLOSED ADE TANK, OR	•	Hold C104*(Ins	tructions	on page 2)
PROPOSED ALTERN NMOCD PART 19	NATIVE METH	HOD, PURSUANT TO R TO THE USE OR /E APPLICATIONS.	4	on Directional Survey and "As Drilled" plat	in the state of th	
nrocedural review pursuent to 43 CFR 3165 8		72.0		A GO TATEOGR	ለመስጥ A	NOTE OF

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

and appeal pursuant to 43 CFR 3165.4

NMOCD NSL 6234A BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

Benson-Montin-Greer Drilling Corporation

449 Canada Ojitos Unit # 46 46 / 424 FSL, 281 FEL Unit P Sec. 27, T25N R01W Rio Arriba County, NM GL Elev: 7296

Drilling Program

1. ESTIMATED FORMATION TOPS: (KB)

Formation Name San Jose	<u>Depth</u> Surface
Ojo Alamo	2876'
Kirtland	2949'
Fruitland	3014'
Pictured Cliffs	3074
Lewis	3229'
Cliffhouse	4904'
Menefee	4987
Point Lookout	5363'
Mancos	5542'
Niobrara "A"	6600'
Niobrara "B"	6663'
Niobrara "C"	6794'
Greenhorn	7448'
Graneros	7519'
Total Depth	7550'
Intermediate TD (7 5/8" Csg)	6350'
Production TD (5 ½" Liner)	
Тор	6150'
Bottom	7550'

2. NOTABLE ZONES (with oil, gas or mineral potential)

Fruitland	Coal / Water / Gas
Pictured Cliffs	Water / Oil / Gas
Cliffhouse	Water / Gas
Menefee	Water / Gas
Point Lookout	Water / Gas
Mancos	Oil / Gas / Water
Greenhorn	Oil / Water

Water zones will be protected by setting and cementing the 10 ¾" surface casing at 500ft. All zones containing commercial quantities of oil or gas will be cased and cemented with either the 7 5/8" intermediate casing or the 5 ½" production liner.

Benson-Montin-Greer Drilling Corporation Canada Oiitos Unit #46 464

49' Canada Ojitos Unit # 46 46 46 44 424' FSL, 281' FEL Unit P Sec. 27, T25N R01W Rio Arriba County, NM GL Elev: 7296'

3. PRESSURE CONTROL: Maximum expected pressure is ~1000 psi. The drilling contract has not yet been awarded, thus the exact BOP and Choke Manifold model to be used is not yet known. A typical 2,000 psi model is pictured in Exhibits A & B. A remote accumulator will be used, the pressures, capacities location of the remote and manual controls will be identified at the time of the BLM supervised BOP test.

BOP equipment, accumulator, choke manifold and all accessories will meet or exceed BLM requirements as listed in Onshore Order #2 for the 2M systems. The pressure control equipment considerations include but will not be limited to:

- 1. BOP will be either double gate rams or an annular preventer.
- 2. Accumulator will have sufficient capacity to close all BOPs and retain 200 psi above pre charge.
- 3. 2" kill line and kill line valve.
- 4. Choke manifold (2" lines) with 2 chokes with valves and gauge.
- 5. Upper Kelly cock with handle available.
- 6. Safety valve and sub(s) available for all drill strings used.
- 7. Fill line above the upper-most BOP.

BOPs will be pressure tested; after initial installation, before drilling out from under all set and cemented casing strings, any time a seal is broken.

Ram type preventors and related pressure control equipment will be pressure tested to 1000 psi.

Annular type preventor will be pressure tested to 50% of the rated working pressure, not to exceed 1000 psi. All casing strings will be pressure tested to 0.22 psi/ft or 1000 psi, whichever is greater, not to exceed 70% of internal yield.

Additionally, the BOPs will be operationally checked every 24 hours. The BOPs will also be pressure tested once every 30 days by a 3rd party.

All tests and pressure tests will be recorded on IADC log.

4. CASING & CEMENT

<u>Hole Size</u>	O.D. Weight (lb/ft)	<u>Grade</u>		<u>Age</u>	Connection	GL Setting Depth
	(Conductor Casing w	ill be use	ed if wa	arrented	1)	
14 3/4"	10 3/4"	40.5# 、	J-55	New	ST&C	500'
9 7/8"	7 5/8"	26.4# !	N-80	New	LT&C	6350'
6-3/4"	5-1/2"	17#	N-80	New	LŤ&C	6150' to 7550'

Benson-Montin-Greer Drilling Corporation Canada Ojitos Unit # 46 46 4

424' FSL, 281' FEL Unit P Sec. 27, T25N R01W Rio Arriba County, NM GL Elev: 7296'

Surface casing will be cemented to the surface.

Cement and properties; +/- 568 cu. ft. (+/- 409 sx) Type III cement (14.6 ppg density, 1.39 ft3/sx yield) with 2% CaCl2 and 1/4#/sx celloflake. Volume based on 100% excess.

Two centralizers will be run on the shoe joint, one centralizer each on the next two joints and then one centralizer on every third joint thereafter.

Intermediate casing will be cemented to surface in 2 stages, stage tool to be set at +/- 3150'. Cement will be circulated to surface. Volumes based on 45% excess in OH.

Stage 1:

Lead cement will be +/- 899 cu. ft. (+/- 426 sx) Premium Lite w/2% CaCl2, 1/4#/sx cello flake, 6-1/4#/sx gilsonite, 8% gel (12.1 ppg density, 2.11 ft3/sx yield). Tail cement will be +/- 111 cu. ft. (+/- 80 sx) Type III w/2% CaCl2, 1/4#/sx Cello flake (14.6 ppg density, 1.39 ft3/sx yield).

Stage 2:

Lead cement will be +/- 899 cu. ft. (+/- 426 sx) Premium Lite w/2% CaCl2, 1/4#/sx cello flake, 6-1/4#/sx gilsonite, 8% gel (12.1 ppg density, 2.11 ft3/sx yield). Tail cement will be +/- 69 cu. ft. (+/- 50 sx) Type III w/2% CaCl2, 1/4#/sx Cello flake (14.6 ppg density, 1.39 ft3/sx yield).

Two centralizers will be run on the shoe joint, one centralizer on every other joint for 14 joints and then one centralizer on every third joint thereafter.

Production liner will be cemented to the top of liner ensuring cement coverage inside the intermediate casing with a single stage.

Cement and properties; +/- 184 cu. ft. (+/- 91 sx) Premium Lite High Strength FM w/0.3% retarder, 2% KCl, ¼#/sx cello flake, 0.3% dispersant, 5#/sx gilsonite, 1% Fluid loss agent (12.5 pps density, 2.02 ft3/sx yield).

Volumes based on 46% excess in OH.

Two centralizers will be run on the shoe joint, one centralizer on every other joint into the intermediate casing.

The production liner will be pressure tested to 5000 psi for 30 minutes during completion operations.

Where cement has not been circulated to surface (or top of liner) a CBL or temperature survey will be run to determine the TOC for that casing string.

Cement specifications may vary slightly due to cement and cement contractor availability.

Benson-Montin-Greer Drilling Corporation

4년 (46) Canada Ojitos Unit # 46 년 6 》 424' FSL, 281' FEL Unit P Sec. 27, T25N R01W Rio Arriba County, NM GL Elev: 7296'

5. MUD PROGRAM

Depth	<u>Type</u>	Wt./ppg.	<u>Vis.</u>	Fluid Loss
0'-500'	FW gel/lime spud mud	8.4-9.0	30-40	NC
500'-6350'	FW gel/Polymer	8.5-9.2	28-50	<20cc's
6350-7550'	Air/ Air/mist or Nitrogen	N/A	N/A	N/A

Viscosity, mud weight and other physical and chemical characteristics of the drilling mud will be varied as required to keep the hole clean, circulate drill cuttings, prevent caving, prevent lost circulation and maximize penetration rate.

Air /air mist or nitrogen will be used to drill the 6 ¾" section of the hole to reduce the hydrostatic pressure while drilling the pay zones. It is planned to drill the hole from 6350' to TD with an air hammer and 6 ¾" bit. An alternate plan will be in place to drill this section of the hole with mud should the hole conditions warrent.

Sufficient mud and materials will be kept on site to maintain mud properties and meet lost circulation or mud weight requirements at all times.

6. CORING, TESTING, & LOGGING

No cores or drill stem tests are planned. Open-hole logs to be run are:
500' to 6350'; GR/ Cement Bond Log, if cement is not circulated to surface.
6350 to TD; GR/Induction/Density Neutron and possible fracture identification log (caliper or camera for fracture identification).

7. <u>DOWN HOLE CONDITIONS</u>

a.	Expected bottom hole pressure:	+/- 1000 psi
b.	Anticipated abnormal pressure:	None
C.	Anticipated abnormal temperatures:	None
d.	Anticipated hazardous gas (H2S):	None

If any of the foregoing are unexpectedly encountered, suitable steps will be taken to mitigate according to accepted industry best practices.

Benson-Montin-Greer Drilling Corporation

449' Canada Ojitos Unit # 46 46 46 4 424' FSL, 281' FEL Unit P Sec. 27, T25N R01W Rio Arriba County, NM GI Flev 7296'

8. **OTHER INFORMATION**

The anticipated spud date is November 2010. The spud date will be dependent on the weather conditions, road conditions and the Conditions of Approval as provided by the US Forest Service.

The duration of drilling operations is expected to be from two to three weeks. The drilling rig and associated equipment will be removed and preparations will be made for the completion of the well.

Completion will start about one to two weeks after the finish of the drilling operations. A completion rig will be moved in for the completion phase. The completion phase of the well is expected to +/- two weeks. The completion phase will include; perforating, acidizing, fracture stimulation and well testing.

Form 3160-5 (August 2007)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

5. Lease Serial I	NO.	
	NM 070361	
6. If Indian, All	ottee or Tribe Name	
	A1/A	

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.				6. If Indian, Allottee or Tribe Name N/A			
					7. If Unit of CA/Agree	ement, Name and/or No	
SUBMIT IN TRIPLICATE – Other instructions on pag 1. Type of Well				· · · · · · · · · · · · · · · · · · ·	Canada Ojitos	Unit	
Oil Well Gas Well Other					8. Well Name and No.	#46	,
2. Name of Operator Benson-Montin-G	Greer Drilling Corporation				9. API Well No. 30-039-3098	31	
3a. Address		3b. Phone No. (in	clude area cod	e)	10. Field and Pool or I	Exploratory Area	
4900 College Blvd Farmington, NM 87402		505-325-88	374		Puerto Chiq	uito Mancos West	
4. Location of Well (Footage, Sec., T.,	R.,M., or Survey Description)	, , , , , , , , , , , , , , , , , , , ,		11. Country or Parish,	State	
424' FSL and 281' FEL, Sec 27, T25N	i, R1W			, , , , , , , , , , , , , , , , , , , ,	Rio A	Arriba, NM	
12. CHEC	K THE APPROPRIATE BO	X(ES) TO INDIC	ATE NATURE	OF NOTIC	CE, REPORT OR OTH	ER DATA	
TYPE OF SUBMISSION			TYP	E OF ACT	ION		
Notice of Intent	Acidize	Deepen		Prod	uction (Start/Resume)	Water Shut-Off	
	Alter Casing	Fracture	Treat	Recl	amation	Well Integrity	
Subsequent Report	Casing Repair	New Co	nstruction	Reco	mplete	Other	
	Change Plans	Plug and	l Abandon	Tem	porarily Abandon		
Final Abandonment Notice	Convert to Injection	Plug Ba	ck	Wate	T Disposal		
Benson-Montin-Greer Drilling Corpo a depth of 15 ft below GL. The casi The 14 3/4" surface hole was drilled being placed in the hole. Upon furth NMOCD and Santa Fe National For The Canada Ojitos # 46 wellbore wa had closed off at that point. The we cement plug of 17 bbl (95 cu ft) was The tubing was removed from the w Unit # 46Y will be drilled 25' due not	r final inspection.) pration spudded the COU and was cemented with 6.5 to 510', depth reached or her investigation the operal est was obtained to plug the plugged and abandond all was cemented on 1-15-pumped with mud returns tell and 4 bbls (22 cu ft) certains and 4 bbls (22 cu ft)	#46 on Dec 28, 25 cu yds ready min 1-10-2011. Whater determined the existing wellboard as follows: The comment plus to surface, an arment was used f	010. The hole x concrete. en 10 3/4" cas at the existing ore. en workover rigg of 15 bbl (85 dditional 22 bb	was dug sing was to hole was was rigg 5 cu ft)Typ ols (124 cu	with backhoe and 16 be run the hole condition too unstable to use a ed up 1-14-11, 2 7/8" e III was placed at 12 of the condition of the c	" 42.05 lb/ft J-55 casi ditions prevented the and verbal approval fi tubing was run to 12 20'. The tubing was p	ng was set at casing from rom BLM, 6', the hole bulled to 88', a ms to surface.
14. I hereby certify that the foregoing is t	rue and correct. Name (Printe	ed/Typed)					
Loren Diede		1	itle l	Drilling and	d Completions		
Signature Signature	De la companya della companya della companya de la companya della	r	Date 01/17/20	11 '			
	THIS SPACE	FOR FEDER	AL OR ST	ATE OF	FICE USE		
Approved by							
Conditions of approval, if any, are attache that the applicant holds legal or equitable entitle the applicant to conduct operations Title 18 U.S.C. Section 1001 and Title 43	title to those rights in the subjethereon.	ect lease which woul	d Office	d willfully		Date	d States any false,
fictitious or fraudulent statements or repro			5,	,	,	U , :	, ,

Form 3160-5 (August 2007)

UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**



FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

JAN 1 4 20 5 Lease Serial No.

NM 070361

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	TIN TRIPLICATE - Other				7. If Unit of CA/Agree	ement, Name and/or No.	
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Oil Well Gas W	/ell Other				8. Well Name and No.	#46	
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12. CHEC	K THE APPROPRIATE BO	X(ES) TO INDI	CATE NATUR	E OF NOTIC	E, REPORT OR OTH	ER DATA	
TYPE OF SUBMISSION			TY	PE OF ACT	ION		
✓ Notice of Intent	Acidize	Deepe	n	Produ	uction (Start/Resume)	☐ Water Shut-Off	
Notice of Intent	Alter Casing	Fractu	re Treat	Recla	mation	Well Integrity	
Subsequent Report	Casing Repair	New C	Construction	Reco	mplete	Other	
	Change Plans	Plug a	nd Abandon	П Тетр	orarily Abandon		
Final Abandonment Notice	Convert to Injection	Plug F	ack	Wate	r Disposal		
following completion of the involve testing has been completed. Final determined that the site is ready for the cash of the site is ready for the site is	Abandonment Notices must be a final inspection.) pration spudded the COU # ing was cemented with 6.5 and a 14 3/4" hole was drillin. Attempts were made to e alluvium (the top 80') and abandonded hole. The we ent from 130' to surface (2 meeded for the hole move. In submitted with the APD, the existing hole and drillin-2011. Larry Gore from the das the Canada Ojitos United Total Canada Ojitos United Total Inspection.	the filed only after 46 on Dec 28, cu yds ready r led to 510'. 10 repair the hole d may then residell will be enter 30 cu ft) is to to The new hole g of the new hole Santa Fe Na tt #46Y. The new	r all requirement 2010. The honix concrete. 3/4" casing we but with no substituted with 2 7/8" one a Type III on may require reported with 2 7/8" one a Type III one a Typ	vas to be run uccess. The loss of the h tubing to TD ement with (more 16" cor	with backhoe and 16 as the surface casinoperator decided the ole. The decision was or as deep as possicaci2 @ 14.5 ppg anductor casing, but from the verbal approval of the werbal appr	a completed and the operation of the completed and the operation of the condition of the co	was set at lons pair the sting hole cemented e drilling
14. I hereby certify that the foregoing is t	rue and correct. Name (Printed	d/Typed)					
Loren Diede			Title	Drilling and	l Completions		
Signature (- Jan		Date 01/14/2	2011			
	THIS SPACE	FOR FEDE	RAL OR ST	TATE OF	FICE USE		
Approved by Conditions of approval, if any, are attache	d Approval of this action		Title	Pet a	Dy.	Date /-/4-	.//
that the applicant holds legal or equitable:					_		

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any perfections or fraudulent statements or representations as to any matter within its jurisdiction.

OPERATOR 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,

entitle the applicant to conduct operations thereon.