Form 3160 (April 200	

# UNITED STATES DEPARTMENT OF THE INTERIOR

FORM APPROVED OMB No. 1004-0137 Expires March 31, 2007

5.	Lease Serial No.
	NMNM-\$25448

15. Distance from proposed* location to nearest property of lease line, ft (Also to nearest drig. unit line, if any) 660'  18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.  19. Proposed Depth 5,000'  20. BLM/BIA Bond No. on file BLM STATE WIDE 886201C  N M 25  21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,291' GL  22. Approximate date work will start* 23. Estimated duration 3 WEEKS  24. Attachments  The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:  1. Well plat certified by a registered surveyor. 2. A Drilling Plan. 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).  25. Signature  Name (Printed/Typed)  PHONE: (505) 466-8120  PHONE: (505) 466-9682  Name (Printed/Typed)  Date 09/23/2006  PApproved by (Signature)  Name (Printed/Typed)  Date 09/23/2006  PAPPOVED SEP 14 °0'  Office	BLIDEALLOF LAND MAN	INTERIOR	om 1	1 28	NMNM-9254	48	
In   Type of work:   DRILL   REENTER   OTO   FARM   NOTO   NM   NA   S. Lease Name and Well No.   NA   NA   S. Lease Name and Well No.   BISTI GALLUP 20 #2	ADDITION FOR REDMIT TO	2018 8	tb 58 HU T	1 20	6. If Indian, Allotee	or Tribe Na	me
1a. Type of work:   DRILL	APPLICATION FOR PERMIT TO	DRILL OF	REENIER		N/A		
B. Type of Well:     Oil Well     Gas Well   Other     Single Zone   Multiple Zone   SITT GALLUP 20 #2   2. Name of Operator   SLM RIDGE EXPLORATION COMPANY, LLC   9. API Well No. 30-045- 339 #44     3a. Address P.O. BOX 156	la Tuna of work:	ED .	TARMINCTO	NNM	7 If Unit or CA Agr	eement, Nam	e and No.
1b. Type of Well:   Oil Well   Gas Well   Other   Isingle Zone   Multiple Zone   ShSTI GALLUP 20 #2	ia. Type of work.	070	) FARMING 10	, , ,			
2. Name of Operator  ELM RIDGE EXPLORATION COMPANY, LLC  3a. Address P. O. BOX 156 BLOOMFIELD, NM 87413  3b. Phone No. (include area code) (505) 632-3476  10. Field and Pool, or Exploratory BISTILOWER-GALLUP  11. Sec., T. R. M. or Bik. and Survey or An At surface 660' FNL & 1980' FEL At proposed prod. zone SAME  14. Distance in miles and direction from nearest town or post office* 25 AIR MILES SSE OF FARMINGTON, NM  15. Distance from proposed * location to nearest property or lease line, ft (Also to nearest drig, until line, if any) 660' (Also to neare	lb. Type of Well:	<b>√</b> Si	ngle Zone Multip	ole Zone			
BLOOMFIELD, NM 87413  4. Location of Well (Report location clearly and in accordance with any State requirements.*)  At surface 660' FNL & 1980' FEL  At proposed prod. zone SAME  12. County or Parish  BSAN JUAN  13. State  25 AIR MILES SSE OF FARMINGTON, NM  15. Distance from proposed.*		PANY, LLC				394	4
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At surface At proposed prod. zone SAME    At proposed prod. zone   SAME	BLOOMFIELD, NM 87413	(505) 6	532-3476		BISTI LOWE	ER-GALLU	Р
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25 AIR MILES SSE OF FARMINGTON, NM  15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660'  18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.  21. Elevations (Show whether DF, KDB, RT, GL, etc.)  22. Approximate date work will start* 23. Estimated duration 3 WEEKS  24. Attachments  The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:  1. Well plat certified by a registered surveyor.  2. A Drilling Plan.  3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).  1. Name (Printed/Typed)	At proposed prod. zone SAME				13		
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BRIAN WOOD  O9/23/2006  O9/23/2006  OPHONE: (505) 466-8120  OPHONE: (505) 466-8120  FAX: (505) 466-9682  OPHONE: (505) 466-8120  Name (Printed/Typed)  Office  Office  RCUD SEP 14 '0'		Lands, the	6. Such other site	specific info	rmation and/or plans a	s may be requ	aired by the
PHONE: (505) 466-8120 FAX: (505) 466-9682  Approved by (Signature)  Name (Printed/Typed)  Office  RCVD SEP 14 '0'	25. Signature	1					/2006
Approved by (Signature)  Approved by (Signature)  Name (Printed/Typed)  Office  RCUD SEP 14 '0'	Pitle		BRIAN WOOD		, ,	09/23/	
itle AM Office RCVD SEP 14'0'		PHON	E: (505) 466-8120	FAX	X: (505) 466-9682		
HOW FED ROVD SEP 14 V	Approved by (Signature)	) Name	(Printed/Typed)			Date //	13/0
Application approval 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	Title AM	Office	FFO			ID SEP 1	4'07
onduct operations thereon.  Conditions of approval, if any, are attached.	onduct operations thereon.	ls legal or equit	table title to those right	s in the subj			
Fitle 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 Uni	Citle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a cr	rime for any no	erson knowingly and u	illfully to m	ake to any department of	or agency of	the United

\*(Instructions on page 2)

This State of the Confident and Procedural review pursuant to 43 CFR 3165.3

A SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

NOTIFY AZTEC OCD 24 HRS. PRIOR TO CASING & CEMENT

DISTRICT I P.O. Box 1980, Hobbs, N.M. 88241-1980

DISTRICT II 811 South First, Artesia, N.M. 88210

DISTRICT III 1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV 2040 South Pacheco, Santa Fe, NM 87504-2088

# State of New Mexico Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION P.O. Box 2088 Santa Fe, NM 87504-2088

Form C-102 Revised Febuary 21, 1994 Instructions on back

Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

☐ AMENDED REPORT

# 1 30 ICATION PLAT

	<b>BISTICE LOWER GALLUT</b>	5890 Code	<sup>1</sup> API Number
Well Number	Property Name		Property Code
2	TI GALLUP 20 .	BIST	36730
<sup>9</sup> Elevation	<sup>8</sup> Operator Name		7 OGRID No.
6291	OGE EXPLORATION	• ELM RID	149052
	OGE EXPLORATION Surface Location		149052

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
В	20	25 N	12 W		660	NORTH	1980	EAST	SAN JUAN
			11 Botto	om Hole	Location I	f Different Fro	om Surface		
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
12 Dedicated Acres	s 13 Joint o	or Infill 14	Consolidatio	n Code 15 O	rder No.		<u> </u>		
80	1								

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD LINIT HAS BEEN APPROVED BY THE DIVISION

	OR A NON-STANDARD UNIT HAS E	SEEN APPROVED E	SI THE DIVISION
16 S 89°49'23" E	2634.23' S 89°21'16" E	2639.78'	17 OPERATOR CERTIFICATION
<b>1</b>	.09		I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief
7.72	· "	α,	the and complete to the coor of the state of the
2640.72	LAT. 36.392II3°	1980,	
8	LONG. 108.132504°	,	
	NAD 83	, , ,	121/2/
			1 1000
ш		3	Signature BRIAN WOOD
80.		r g	
80.60°0		, AO	CONSULTANT
o z		1	"
	SECTION 20	ď	Date
	SECTION 25		18 SURVEYOR CERTIFICATION
			I hereby certify that the well location shown on this plat
72.			was plotted from field notes of actual surveys made by me
2640.72		9	- No what my supervision, and that the same is true and
564		740	
		•	Date of Comment
			BERT L. PO
ш		3	Signature and State of Professional Surveyor:
0.6		7 Y	6846
#80,60 <sub>°</sub> 0			TARRY VE
z		U	
N 89°48'12" W		5272.70	Certificate Number ESSIONA
		<del>'</del>	

	Submit 3 Copies To Appropriate District Office	State of New Mexico	Form C-103
	District I 1625 N. French Dr., Hobbs, NM 88240	Energy, Minerals and Natural Resources	May 27, 2004 WELL API NO.
- <sup>3</sup> .	District II	OIL CONCEDIATION DIVIGION	30-045-
	1301 W Grand Ave., Artesia, NM 88210 District III	OIL CONSERVATION DIVISION 1220 South St. Francis Dr.	5. Indicate Type of Lease
	1000 Rio Brazos Rd, Aztec, NM 87410	Santa Fe, NM 87505	STATE FEE
	<u>District IV</u> 1220 S St. Francis Dr, Santa Fe, NM 87505	Santa 1.e, INM 67303	6. State Oil & Gas Lease No. NMNM-025448
		ES AND REPORTS ON WELLS	7. Lease Name or Unit Agreement Name
		LS TO DRILL OR TO DEEPEN OR PLUG BACK TO A TION FOR PERMIT" (FORM C-101) FOR SUCH	
	PROPOSALS.)	, ,	BISTI GALLUP 20 8. Well Number 2
		s Well 🔲 Other	
	2. Name of Operator ELM RIDGE EXPLORATION COMP	PANY, LLC	9. OGRID Number 149052
	3. Address of Operator		10. Pool name or Wildcat
	P. O. BOX 156, BLOOMFIELD, NM	87413	BISTI LOWER-GALLUP
	4. Well Location		
	Unit Letter: B	660' FNL & 1980' FEL	
	Section 20	Township 25 North Range 12 We	
	Control of the second of the s	11. Elevation (Show whether DR, RKB, RT, GR, et	tc.)
	Pitor Below-grade Tank Application Le or Cl	5,291' GL losure □	
		: >100' Distance from nearest fresh water well: >5,000' Di	istance from nearest surface water: >100'
			onstruction Material
,		Appropriate Box to Indicate Nature of N	
			•
	NOTICE OF INTE		JBSEQUENT REPORT OF:
	<del></del>	PLUG AND ABANDON REMEDIAL WO	<b>—</b>
		CHANGE PLANS COMMENCE D MULTIPLE COMPL CASING/CEME	DRILLING OPNS.□ PAND A □ ENT JOB □
	TOLE ON ALTEN CASING	VIOLITIFEE COMPL	EN JOB
	OTHER: DRILLING PIT	OTHER:	
		ed operations. (Clearly state all pertinent details, a SEE RULE 1103. For Multiple Completions: Atta	and give pertinent dates, including estimated date of
	recompletion.	BEE ROLE 1103. For Multiple Completions. Att	ach wendore diagram of proposed completion of
	<b>I</b> -		
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-		$\bigcap$	
I	hereby certify that the information about the hereby certify that the information about the beautiful that the hereby certify the hereby certify the hereby certify the hereby certified as the hereby	we/is true and complete to the best of my knowled g to NMOCD guidelines █, a general permit ☐ or an (at	ige and belief. I further certify that any pit or below-grade tank ttached) alternative OCD-approved plan $\square$ .
5	SIGNATURE SUDVE	TITLE: CONSULTANT	DATE: SEPT. 23, 2006
	Type or print name: BRIAN WOOD For State Use Only	E-mail address: brian@permitswest.com	Telephone No.: (505) 466-8120
_		Deputy Oil & Gas	
F	APPROVED BY:	TILE DISTICL#	DATEDATE

APPROVED BY:
Conditions of Approval (if any):

PAGE 1

Elm Ridge Exploration Company, LLC Bisti Gallup 20 #2 660' FNL & 1980' FEL Sec. 20, T. 25 N., R. 12 W. San Juan County, New Mexico

### Drilling Program

### 1. ESTIMATED FORMATION TOPS

Formation	GL Depth	KB Depth	<u>Elevation</u>
Nacimiento	0'	12'	+6,291'
Fruitland	941'	953'	+5,350'
Pictured Cliffs	1,191'	1,203'	+5,100'
Lewis Shale	1,291'	1,303'	+5,000'
Cliff House	1,941'	1,953'	+4,350'
Menefee Shale	2,541'	2,553'	+3,750'
Point Lookout	3,61 <i>6</i> ′	3,628'	+2,675'
Mancos Shale	3,816'	3,828'	+2,475'
Gallup Sandstone	4,791'	4,803'	+1 <b>,</b> 500'
Total Depth	5,000'	5,012'	+1,291'

#### 2. NOTABLE ZONES

Oil &/or Gas Zones	Water Zones	<u>Coal Zone</u>
Fruitland	Nacimiento	Fruitland
Pictured Cliffs	Fruitland	•
Gallup	Pictured Cliffs	

Water zones will be protected with casing, cement, and weighted mud. Fresh water encountered during drilling will be recorded by depth, cased, and cemented. Oil and gas shows will be tested for commercial potential based on the well site geologist's recommendations.

#### 3. PRESSURE CONTROL

The drilling contract has not yet been awarded, thus the exact BOP model to be



Elm Ridge Exploration Company, LLC Bisti Gallup 20 #2 660' FNL & 1980' FEL Sec. 20, T. 25 N., R. 12 W. San Juan County, New Mexico

used is not yet known. A typical 2,000 psi model is on PAGE 3.

A  $\geq$ 2,000 psi BOP and choke manifold system will be installed and tested to 2,000 psi before drilling surface casing plug. It will remain in use until the well is completed or abandoned. A safety valve and sub with a full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when kelly is not in use.

All BOP mechanical and pressure tests will be recorded on the driller's log. BOPs will be inspected and opened and closed at least daily to assure good mechanical working order. Inspections will be recorded on the daily drilling report. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place.

#### 4. CASING & CEMENT

<u>Hole Size</u> <u>O. D.</u>	<u>Weight (lb/t</u>	<u>ft) Grade</u>	<u> Type</u>	<u>Age</u>	<u>Depth Set</u>
12-1/4" 8-5/8"	24 .	J-55 or K-55	ST&C	New	350'
7-7/8" 5-1/2"	24 10.5 15.5	J-55	LT&C	New	5,000'

Surface casing will be cemented to the surface with  $\approx 290$  cubic feet ( $\approx 245$  sacks) Class B with 1/4 pound per sack cellophane + 2% CaCl<sub>2</sub>. Yield = 1.18 cubic feet per sack. Weight = 15.2 pounds per gallon. Volume = 100% excess. Centralizers will be installed on the middle of the shoe joint and every other centralizer thereafter.

Production casing will be cemented to the surface in 2 stages with a stage tool set @  $\approx$ 3,500'. Centralizers will be installed on the middle of the shoe joint and on every joint thereafter ( $\approx$ 2 dozen centralizers). Thread lock the guide shoe, bottom of float collar, and bottom of stage tool only. Use API casing dope.



Elm Ridge Exploration Company, LLC Bisti Gallup 20 #2 660' FNL & 1980' FEL Sec. 20, T. 25 N., R. 12 W. San Juan County, New Mexico

First stage volume will be  $\approx 525$  cubic feet consisting of  $\approx 125$  sacks of Halliburton light with 65/35 poz mix + 1/4 pound per sack cellophane + 2% CaCl<sub>2</sub> (yield = 1.87 cubic feet per sack, weight = 12.7 pounds per gallon) followed by  $\approx 250$  sacks Class B with 2% CaCl<sub>2</sub> (yield = 1.18 cubic feet per sack, weight = 15.2 pounds per gallon). Volume = >100% excess, but caliper logs will be used to determine actual volume needed.

Second stage volume will be  $\approx 1,215$  cubic feet consisting of  $\approx 618$  sacks of Halliburton light with 65/35 poz mix + 1/4 pound per sack cellophane + 2% CaCl<sub>2</sub> (yield = 1.87 cubic feet per sack, weight = 12.7 pounds per gallon) followed by  $\approx 50$  sacks of Class B with 2% CaCl<sub>2</sub> (yield = 1.18 cubic feet per sack, weight = 15.2 pounds per gallon). Volume = >100% excess, but caliper logs will be used to determine actual volume needed.

#### 5. MUD PROGRAM

<u>Depth</u>	<u>Type</u>	ppg	<u>Viscosity</u>	Fluid Loss	Нq
. 0 <b>' -</b> 350 <b>'</b>	Fresh water gel chem	9.0	50	NC	9
350' - TD	Fresh water gel chem	9.0	38-50	6.0	9

Enough material to maintain mud properties, control lost circulation, and contain a blowout will be at the well site while drilling. Mud will be checked hourly by rig personnel. Material to soak up possible oil or fuel spills will be on site.

#### 6. CORES, TESTS, & LOGS

No cores or drill stem tests are planned. DIL/GR logs will be run from TD to surface. CNL/FDC logs may be run over selected segments. Samples will be collected every  $\approx 10^{\circ}$  through the Gallup. Samples will be collected every  $\approx 30^{\circ}$  elsewhere.



Elm Ridge Exploration Company, LLC Bisti Gallup 20 #2 660' FNL & 1980' FEL Sec. 20, T. 25 N., R. 12 W. San Juan County, New Mexico

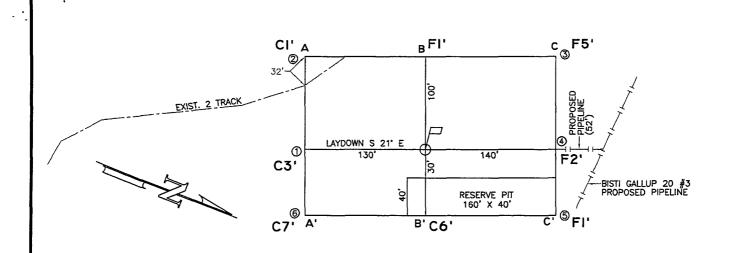
### 7. DOWN HOLE CONDITIONS

No abnormal pressures, temperatures, or hydrogen sulfide are expected. Maximum expected bottom hole pressure will be  $\leq 2,150$  psi.

# 8. OTHER INFORMATION

The anticipated spud date is February 1, 2007. It is expected it will take 1 week to drill and 2 weeks to complete the well.





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6270	

LEASE: BISTI GALLUP 20 #2						
FOOT	AGE:_ <b>_6</b>	60' FN	L, 1980'	FEL		
SEC	20	TWN	25 N	RNG	12 W	NMPM

LATITUDE: <u>36.392113°</u> LONGITUDE: <u>108.132504°</u>

ELEVATION: 6291

# ELM RIDGE EXPLORATION DALLAS, TEXAS

SURVEYED: 3/01/06	REV. DATE:	APP. BY R.P.
DRAWN BY: A.D.	DATE DRAWN: 3/06/05	FILE NAME: 6540C01

UNITED FIELD SERVICES INC.

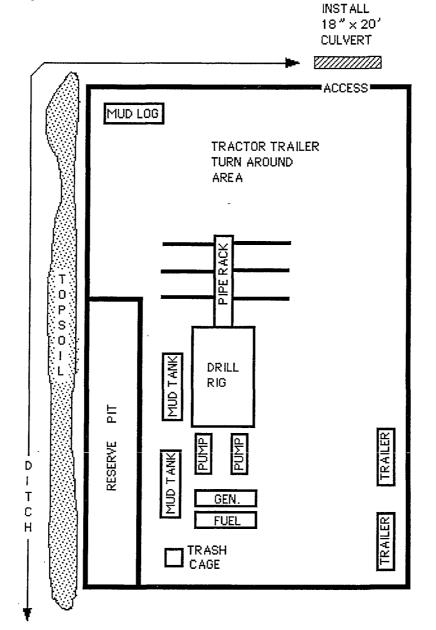
P.O. BOX 3651 FARMINGTON, NM 87499 OFFICE: (505) 334-0408 Elm Ridge Exploration Company, LLC

Bisti Gallup 20 #2

660' FNL & 1980' FEL

Sec. 20, T. 25 N., R. 12 W.

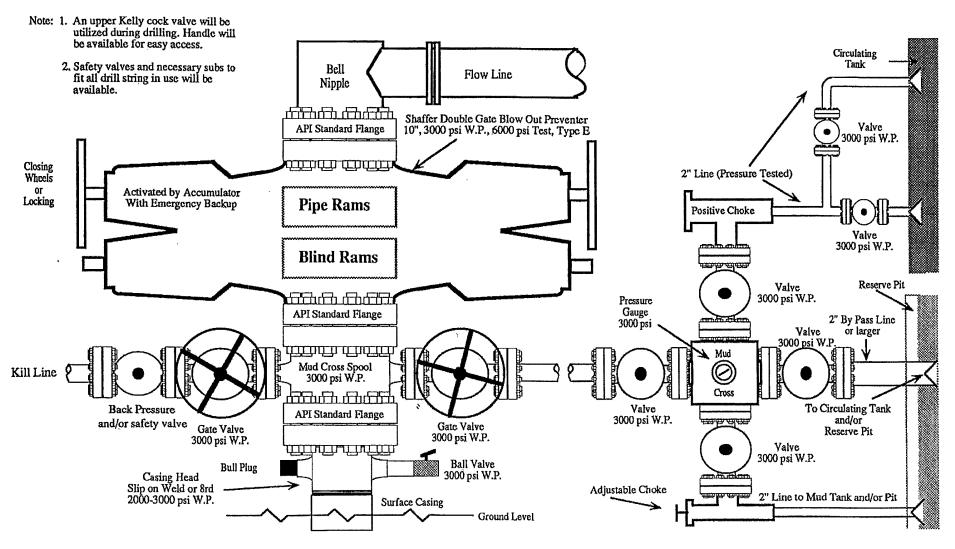
San Juan County, New Mexico







# 2,000 PSI BOP SYSTEM



Note: This equipment is designed to meet requirements for a 2-M rating standard per 43 CFR part 3160 (amended). Proper operation and testing of equipment will be carried out per standard. 2,000 psi equipment can be substituted in the drawing to meet minimum requirements per standard.