Form 3160-5		, OCD-H	OBBS	FORM APPROVED							
(September 2001)	UNITED STATES DEPARTMENT OF THE	INTERIOR	HOBBS OCI								
SUNDB	BUREAU OF LAND MAN Y NOTICES AND REF		LLS a a so	5 Lease Serial No. LC-069048							
Do not use	this form for proposals t well. Use Form 3160-3 ()	o drill or to re-	enter an	6. If Indian, Allottee or Tribe N							
SUBMIT IN TI	SUBMIT IN TRIPLICATE- Other instructions on reverse side.										
I Type of Well ✓Orl Well□□	Gas Well	8. Well Name and No.									
2 Name of Operator SandRidge	Expl. & Prod., LLC			Wylie Federal #1 9 API Well No.							
3a Address 123 Robert S. Kerr Ave., Ok	lahoma City, OK 73102	3b. Phone No <i>(include</i> 405-429-6518	e area code)	30-025-07896 10. Field and Pool, or Explorator							
4 Location of Well (Footage, Sec	c, T., R., M, or Survey Description)			Littman San Andres							
Unit N, 990' FSL & 330' FE Section 9 T21S R38E				11 County or Parish, State							
				Lea Co., NM REPORT, OR OTHER DATA							
TYPE OF SUBMISSION	APPROPRIATE BOX(ES) TO		PE OF ACTION								
	Acidize	Deepen		(Start/Resume) Water Shut-Of							
Notice of Intent	Alter Casing	Fracture Treat	Reclamation								
Subsequent Report	Casing Repair	New Construction	Recomplete	Other							
Final Abandonment Notice	Change Plans	Plug and Abandon Plug Back	Temporarily	····							
Attach the Bond under which following completion of the in	the work will be performed or provident of the operations. If the operation in Final Abandonment Notices shall be been been been been been been been	y, give subsurface location de the Bond No on file w results in a multiple comp	ns and measured and vith BLM/BIA Record	of any proposed work and approximate I true vertical depths of all pertinent man juired subsequent reports shall be filed v on in a new interval, a Form 3160-4 sha lamation, have been completed, and the							
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Well name: Wylie Federal #1

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Field	I ex-Mex
State, County	New Mexico,Lea
Location.	Sec 9, T21S, R38E
TD	4,360'
PBTD	4,360'
TOC	TOC @ 2050'
КВ	3,581'
GL	3,566'
Wellhead	Larkin Head
Misc info	6 125" Open Hole from 4321' to 4360'
	-

BHT

103 °F at 4341'

HIGH // JO THE POWER OF US

Engineer in Charge: Torrey Wetsel Office. 405-429-6429, Cell 405-365-6529, twetsel@sandridgeenergy.com

CSG	OD	ID	Drift	GRADE	THD	WT/FT	TOP	BTM	# JTS	BIT SZE	DEPTH	SXS	Burst	Collapse
Surface	8 625"	8 097"	7 972"	J-55	ST&C	24 00#	0'	00'	38	12 250"	1616'	150	2,950	1,370
Prod	7 000"	4 892"	4 767"	J-55	LT&C	20#/23#	0'	4,321'	171	7 875"	4321'	200	4,360	6,290
Open Hole	6 125"	-	-	-	-	-	4321"	4360'	-	-	4360'		-	-
Production Tubing	2 375"	2 441"	2 347"	J-55	EUE	4 70#	0'	4,306'	220	-	-	-	7,699	7,680
0% of 7" casing burst: 0% of 2-3/8" tubing: 0% of 2-7/8" N-80 Wo					3,488 6,159 8,453	psig	709%	= 8	~6) (JES.	/	l, O, .	2	

PURPOSE: The purpose of this recompletion procedure is to deepen the open hole section of San Andres 300 ft. to 400 ft. from 4360' to ~ 4760'.

LOG INFORMATION OPEN HOLE LOGS None CASED HOLE LOGS. None

CORRELATION, None

SAN ANDRES DEEPEN & RECOMPLETION

1 MIRU flow/swab testing tank and hard-line to the wellhead ND wellhead

2 MIRU WSU POOH AND LD rods and pump. ND wellhead NU stripping head.

- 3 NU 5000 psi hydraulic BOP (2-3/8" pipe rams on top and blind rams on bottom).
- 4 POOH and LD 2-3/8" 4 7 ppf J-55 EUE production tubing Visually inspect tubing while POOH ND stripping head
- 5. MIRU Drilling Rig w/ Foamed Air Unit POOH AND LD rods and pump NU flow cross and circulation pits

6 MI & talley ~4800' of new 2-7/8" 6 5 #/ft, J55 EUE 8rd tubing (must be cleaned & inspected). Tubing will be used as production tubing once decoperations are complete.

7 PU & RIH with 6-1/8" Tri-Cone-Center Jet-Rock Bit, bit sub, 6 - 4-3/4" drill collars and 2-7/8" 6 5 #/ft J55 tubing to bottom of 7" casing shoe @ (Install 2-String Floats in tubing & 3-check valves w/ "weep" holes plus 1- JU Stripper Rubber)

8 RU Foamed Air Unit, Reverse Unit with pump & pit system PU power swivel and establish circulation down tubing with foamed 2% KCL wateri corrosion inhibitor as needed to protect casing and tubulars) If unable to establish circulation, contact operations engineer in OKC office.

9 Clean out 6-1/4" Open Hole section from 7" csg shoe @ 4321' to TD @ ~4360'. Drill additional San Andres open hole from 4360' to ~ 4760' Circulate hole clean. TOOH laying down bit, bit sub,drill collars and SB WS.

10) PU and TIH w/ the following tubing and BHA assembly (see attached schematic):

- a. Halliburton 4' perforated sub with Bull Plug
- b 3 jts 2 7/8" 6.5#, J-55, EUE tubing + 1 ~15' sub of 2 7/8" 6 5#, J-55, EUE tubing.
- c Halliburton BASS tool #1 in closed position (ID = 1.562" for 1-5/8" ball).
- d 3 jts 2 7/8" 6 5#, J-55, EUE tubing + 1 ~15' sub of 2 7/8" 6 5#, J-55, EUE tubing
- e. Halliburton BASS tool #2 in closed position (ID = 1.687" for 1-3/4" ball)

- f. 3 jts 2 7/8" 6.5#, J-55, EUE tubing + 1 ~15' sub of 2 7/8" 6.5#, J-55, EUE tubing.
- q. Halliburton BASS tool #3 in closed position (ID = 1 812" for 1-7/8" ball)
- h. 3 its 2 7/8" 6 5#, J-55, EUE tubing + 1 ~15' sub of 2 7/8" 6.5#, J-55, EUE tubing.
- i Halliburton BASS tool #4 in closed position (ID = 1.937" for 2" ball).
- j~12 jts 2 7/8" tubing

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- k 5 1/2" Halliburton PLT packer w/ XL On-Off tool.
- | ~ 131 joints 2-7/8" tubing to surface

Space out BASS tools evenly across the vertical section with Perf sub @ ~4760', BASS tool # 1 @ ~4660', BASS tool #2 @~4560', BASS tool #3 @ ~4460', BASS tool #4 @ ~4360' and PLT packer @ ~4310' (just above 7" casing shoe). Depths may be adjusted to space out according to well-plan provided by Halliburton.

11) Set PLT Packer MIRU pump truck Tie onto Tubing casing annulus and pressure test packer and casing to 3,000 psig. Bleed off pressure and release packer. MI, set and load 2 lined acid tanks with 25,000 gals 20% NE-Fe HCI. The night before pumping the job, MI hot oiler and heat acid to 140 deg F.

12) MIRU Halliburton stimulation crew. Hold PJSM and pressure test lines to 5500 psig. Establish ciructation down tubing with 2% KCL Once ciructation is established, pump ~14 bbls Halliburton Chemical packer and displace into annulus with 30 bbls 2% KCL Set PLT packer. Confirm volumes with service company. Catch sample of chemical packer and place in heat bath Tie pumps onto tubing-casing annulus and pressure test to 500 psig. Leave pressure on backside and monitor throughout the job Allow at least 1 hour for chemical packer to set. Confirm that sample in the heat bath has set up before proceeding. Acid frac San Andres OH (~4,321'- 4760' OA) down 2 7/8" tbg with 25,000 gals 20% NE-Fe HCL as per attached recommendation at 18 BPM or max lower rate without exceeding a treating pressure of 5000 psig. RDMO Halliburton stimulation crew.

- a. Frac interval per attached pump schedule
- b. All gelled 20% NE-Fe HCl to contain corrosion inhibitor designed to inhibit acid for 24 hours at 101 deg F, non-ionic surfactant, clay stabilizer and 20 ppt gelling agent (See service company for additive volumes).
- c. Monitor pressures while dropping balls and pump at no more than 5 BPM until ball is landed and sleeve is opened.
- d. Monitor annular pressure during job. Record ISIP, and 5, 10, and 15 min SIPs. SI for at least 2 hours to allow get to break, acid to spend, and chemical packer to dissolve

13) NU ball catcher Open well on 16/64" choke to swab tank and flow well back until FTP is 0 psig. Release packer. TOH with tubing, packer and BHA. SB tubing and LD packer and BASS tools. PU and TIH w/ 6-1/8" bit, bit sub and 2 7/8" tubing and DO/CO to TD at ~ 4721'. Attempt to circulate hole clean with 2% KCL. TOH to bottom of 7" casing shoe at 4,321'. RIH w/ swab and swab well until fluids are clean. TOH w/ tubing, bit sub and bit.

14) PU and TIH with the following tubing assembly: (Same as previously pulled)

- a. 4 1/2" slotted joint Gas Anchor w/ bull plug on bottom
- b. 2-7/8" x 4-1/2" change over
- c. 2-7/8" seat nipple
- d. 4 joints 2-7/8" tubing
- d 2-7/8" x 5-1/2" TAC
- e ~130 its 2-7/8" tubing to surface.

Set bottom of 4 1/2" Gas Anchor at ~ 4315' (6' above 7" csg shoe) Set TAC at ~4160' w/ SN at ~4282' and EOT at ~ 4,315'. ND Stripping head, BOP, and flange. NU WH. Set TAC w/ 16 points tension Flange up WH

15) PU and RIH w/ the following pumping assembly (Same as previously pulled)

- a 14' x 1-1/4" gas anchor w/ 124 1/4" diamter holes on bottom
- b. Exchanged 2-1/2" x 1-3/4" x 24' RHBC pump
- c. 1 stabilizer bar
- d. 11 1-1/2" Grade "C" SBs alternated w/ 5 stabilizer bars
- e. 8 3/4" D90 rods.
- f 77 7/8" D90 rods
- g 71 1" D90 rods
- h Ponies as needed and PR w/ PRL

Space out and seat pump. Load and test tubing and hang well on. Start pumping unit with a 144" stroke length (middle hole) at 8 SPM and check pump action. RDMO WSU. **NOTE: This PU and rod design will move 334 BFPD w/ a 144" stroke length** at 8 SPM w/ 85% pump fillage at pumped off conditions (see attached XROD design).

16) Put well on production and report to OKC daily for 10 days Well to be tested daily for 10 days after first oil production then at least weekly for one month.

Dev	CURRE	INT															
IGL 3566' КВ 3581'		w	ELL NAME API NO			LOCATION	r 990 F8 N Sec. 9	L, 330 FEL T218, R38E		OPERATO ZON	R Sa F	ndridge Energy San Andres	SPUD DATE RR DATE	07/26/53			
				W		1	00 00000%	FIELD) Te	x-Mex		ELEVATIO	N	3 566'	MICU	00/0/72	
1						9 '		119833	COUNTY STATE	/ Nev	Lea / Mexico		T PBT	D D	4,360' 4,360'	COMPL DATE AFE NO	09/19/53
				CSG	ÓD	GRADE	THD	PIPE RECORD	TOP	BTM	# Jīs	BIT SZE			CEMENT 8	HOLE DATA	TOC
				Conductor	r 14 000"	" N 80	ST&C	72 00#	00'	60'	1	NA I	80'	NA		NA	Surface
			11	Surface		J-55	ST&C	24 00#	00'	1,616'	38	12.250	1	150		Neat	Surface
			·	Prod	7 000"	J 55	LT&C	20#/23#	00'	4,321'	171	7 875"	4,321'	200	432	Neat 4360' is OH	Est TOC @ 2050
	111	11	11	1 71-1	2 375*	J-55	EUE	4 70#		4 306'	220		4,305	1	-		
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			1 616	02/22/12	POH w/r	nds SDI	N Prep to FC	d stuck IH - Pmpd hot wir d DI w/ ibg	I DECKNOG SU								
				02/23/12 02/24/12		51 j1s 2-3/8 of build of	s" ibg Rptc'd	heli nipple & ibg heail - Ni, SN @4310',Iagged up @43-	BOP SDEN	da to TD 4360° wa	11 has 8th D classe	ad out to them		noh Silan III	n last in morning C		
			Rod Detail (Mar '10)	02/25/12	fstd m ho	ole vv/62 jt	s, test har gett	ing stock. Ring testor dir RI									
			1250 /16' polash rud 8', 6 , 2' subs,	02/27/12		in till Mon well Mar		15 bbls durty water RH w	(nmn & rods - S	DEN							
			93-3/4 ' rods	02/28/12				RTP SDFN Will RDMO									
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			1														
			1														
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				Date	Zone	(kibs)	(bbls)	Total Fluid Type (Pad/Prepad/Frac/Flush)	Prop Type	AIP(psig)	ISIP	DATE	TOP	втм	ZONE	Phasing	Status
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· ·]		- F			ļ					8 625" J-55 ST& 7" J-55 LT&C 20	C 24# /#/23##		8 097 4 892	7 972 4 767	1,370 6,290	2,950 4,360	244,000 397,000
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		ŀ		Í	ŀ					2 375" J-55 EUE			2 441	2 347	7,680	7,260	99 660
			SN @ 4290"	REMARKS					Packer Detail	Safety Factor N	ot Included						
			EOT @ 4306		(Oper	n 6-1/4" h	ole from 432	1-4360')									
4	_	1	" രഷം						ENGINEER [,] GEOLOGIST.		Torrey Wetsel						
1			7" @ 4321' DH San Andres 4321-						LANDMAN							~ ~	
		('	4360'						PREPARED E		Julie Finley 5/15/2012	UPDATED				Sand	Ridge
(_}	FD 4360'						UPDATED		,	UPDATED					ENT RUY
	~~~	~							UPDATED			UPDATED					

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## Wylie Federal 31 San Andres (4321' - 4721') Pump Schdule Lea County, New Mexico



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		RIDGE				Stage 1 .	. San And	ires Interval					
т	HE POV	VER OF US	Stage	Stage	Cum	Total	Stage	Prop	Prop	BH	Clean	Clean	Cum
			Clean	Clean	Clean	Rate	Prop	Total	Type	Conc	Fluid Stage	Fluid Total	Time
Stage	#	Fluid Type	Vol (Gals)	Vol (Bbls)	Val (bbls)	BPM	#'s	#''s	[	PPG	Vol (bbls)	Vol (bbls)	Mins
Pre-Pad	1	2% KCL w/ 55 gals SI	1,500	35 7	357	18	0			0.00	35.7	35 7	1 98
Pad	2	30# LG	3,000	714	107 1	18	0	-		0.00	71.4	107 1	5 95
Acid	3	20% gelled NE-Fe HCI Acid	2,500	59 5	166 7	18	0	-		0.00	59.5	166.7	9 26
Pad	4	30# LG	2,500	59 5	226 2	18	0	•		0.00	59.5	226.2	12 57
Acid	5	20% gelled NE-Fe HCI Acid	2,500	59 5	285 7	18	0	-		0.00	59.5	285 7	15 87
Flush	6	2% KCL	3,000	71.4	357 1	18	0	-		0.00	71.4	357.1	19 84
Bail # 1	7	2% KCL	1,194	28 4	385 6	5	0	-		0.00	28.4	385.6	25 53
Pre-Pad	8	2% KCL w/ 55 gals SI	1,500	35 7	421 3	18	0			0.00	35.7	421.3	27 51
Pad	9	30# LG	3,000	714	492 7	18	0	-		0.00	71.4	492.7	31 48
Acid	10	20% gelled NE-Fe HCI Acid	2,500	59 5	552 2	18	0	-		0.00	59.5	552.2	34 79
Pad	11	30# LG	2,500	59 5	6118	18	0	-	-	0.00	59.5	611 8	38 09
Acid	12	20% gelled NE-Fe HCI Acid	2,500	59 5	671 3	18	0	-		0.00	59.5	671 3	41 40
Flush	13	2% KCL	3,000	71.4	742 7	18	0	-	_	0.00	71.4	742.7	45 37
Ball # 2	14	2% KCL	1,166	27 8	770 5	5	0	-		0.00	27.8	770.5	50 92
Pre-Pad	15	20% KCL w/ 55 gals SI	1,500	35 7	806 2	18	0			0.00	35.7	806.2	52 90
Pad	16	30# LG	3,000	714	877 6	18	0	-		0.00	714	877.6	56 87
Acid	17	20% gelied NE-Fe HCI Acid	2,500	59 5	937 1	18	0	-		0.00	59.5	937.1	60 18
Pad	18	30# LG	2,500	59 5	996 7	18	0	-		0.00	59.5	996.7	63 49
Acid	19	20% gelled NE-Fe HCI Acid	2,500	59 5	1056 2	18	Ô			0.00	59.5	1056.2	66 79
Flush	20	2% KCL	3,000	71.4	1127 6	18	0	-	_	0.00	71.4	1127.6	70 76
Ball # 3	21	2% KCL	1,137	27 1	1154 7	5	0	-		0.00	27.1	1154.7	76 18
Pre-Pad	22	2% KCL w/ 55 gals SI	1,500	35 7	1190 4	18	0			0,00	35.7	1190.4	78 16
Pad	23	30# LG	3,000	714	1261 8	18	0	-	-	0.00	71.4	1261.8	82 13
Acid	24	20% gelied NE-Fe HCI Acid	2,500	59 5	1321 4	18	0	-		0.00	595	1321.4	85 44
Pad	25	30# LG	2,500	59 5	1380 9	18	0	-		0.00	59.5	1380 9	88 74
Acid	26	20% gelled NE-Fe HCI Acid	2,500	59 5	1440 4	18	0	-	_	0.00	59.5	1440.4	92 05
Flush	27	2% KCL	3,000	714	1511 8	18	0	-	_	0.00	71.4	1511.8	96 02
Ball#4	28	2% KCL	1,109	26 4	1538 2	5	0	•	_	0.00	26.4	1538.2	101 30
Pre-Pad	29	2% KCL w/ 55 gals SI	1,500	35 7	1574 0	18	0			0.00	35.7	1574.0	103 28
Pad	30	30# LG	3,000	714	1645 4	18	0	-		0.00	71.4	1645.4	107 25
Acid	31	20% gelled NE-Fe HCI Acid	2,500	59 5	1704 9	18	0	-		0.00	59.5	1704.9	110 56
Pad	32	30# LG	2,500	59 5	1764 4	18	0	-		0.00	59.5	1764 4	113 86
Acid	33	20% gelled NE-Fe HCI Acid	2,500	59 5	1824 0	18	0	•		0 00	59.5	1824.0	117 17
Flush	34	2% KCL	3,000	714	1895 4	18	0	-		0 00	71.4	1895.4	121 14

7 in. Casing Shoe: 4321'

Pad %

58%

.

Prop Conc

Max Pressure = 5000 psig

Anticipated treating pressures = 2,800 psig HHP = 2200 (liquid side w/o backup) Ramped Proppant injection.

Vertical Open Hole Section. 4321' to ~ 4760' Bass Tools:

#### Fluid Requirements

1 Frac fluid to have minimum temp of ~ 70° F 12 hours prior to treatment

2 BHT = 103" F (BHP Survey)

3 Est FG = 0 65 psi/ft

5 Recommended live breaker (1-2 gpt)

6 All fresh water will be treated with biocide and crystalline KCI to achieve a minimum of 2% KCI by volume

7 All 20% NE-Fe HCI to contain corrosion inhibitor designed to inhibit acid for 24 hours at 103 deg F, non-ionic surfactant, clay stabilizer and 20 ppt

gelling agent (See service company for additive volumes)

8 Stage 1, 8, 15, 22, and 29 to contain 55 gals of Champion Gyptron T-249 (or equivalent) Scale Inhibitor

#### **Operational Considerations**

1 Frac Tanks = 3 filled with treated water

2 2 lined acid tanks filled with 25,000 gals 20% NE-Fe HCI total

3 Heat acid to 140 deg F the night before the job

4 Slow rate to drop balls. Watch pressures after dropping balls and SD if necessary to stay below max pressure

5 Flush volumes to be determined on location pending BASS tool depths

## **Conditions of Approval**

SandRidge Expl. & Prod., LLC Wylie Federal #1 API 30-025-07896 August 16, 2012

- 1. Provide BLM with an electronic copy (Adobe Acrobat Document) cement bond log record from 4300' or below to top of cement. CBL shall be reviewed before continuing with procedure. The CFO BLM on call engineer may be reached at 575-706-2779.
- 2. Surface disturbance beyond the existing pad shall have prior approval. May be needed due to air unit no rig schematic attached.
- 3. In addition to the equipment already specified elsewhere in Onshore Order 2, the following equipment shall be in place and operational during air/gas drilling:
  - Properly lubricated and maintained rotating head
  - Spark arresters on engines or water cooled exhaust
  - Blooie line discharge 100 feet from well bore and securely anchored
  - Straight run on blooie line unless otherwise approved
  - Deduster equipment
  - All cuttings and circulating medium shall be directed into a reserve or blooie pit
  - Float valve above bit
  - Automatic igniter or continuous pilot light on the blooie line
  - Compressors located in the opposite direction from the blooie line a minimum of 100 feet from the well bore
  - Mud circulating equipment, water, and mud materials (does not have to be premixed) sufficient to maintain the capacity of the hole and circulating tanks or pits
- 4. A closed loop system is required. The operator shall properly dispose of drilling/circulating contents at an authorized disposal site. Tanks are required for all operations, no excavated pits.
- 5. Functional H₂S monitoring equipment shall be on location.
- 6. A minimum 2000 (2M) BOPE to be used. All blowout preventer (BOP) and related equipment (BOPE) shall comply with reasonable well control requirements. A two ram system with a blind ram and a pipe ram designed for the work string shall be adequate. Tapered work strings will require an additional pipe ram. The manifold shall comply with Onshore Oil and Gas Order #2 (attachment 1, 2M diagrams of choke manifold equipment). The accumulator system shall have an immediately available power source to close the rams and retain 200 psi above pre-charge. The pre-charge test shall follow requirements in Onshore Order #2.

7. All waste (i.e. trash, salts, chemicals, sewage, gray water, etc.) created as a result of work over operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

and and

### **Procedure modifications:**

- 8. Operator's step 11 pressure test shall not exceed 2600 psi. The casing is 7" 20#, which would be a J-55 grade. Onshore Order 2 maximum allowed pressure is 70% of burst. For this casing, that calculates to 2618 psi. Test shall be charted and witnessed by BLM PET. At least 24 hours before the test contact: Andy Cortez <u>acortez@blm.gov</u>, (phone 575-393-3612 or 575-631-5801). If no answer, leave a voice mail with the API#, workover purpose, and a call back phone number. Note the contact notification method, time, & date in your subsequent report. Include a copy of the chart in the subsequent sundry for this workover.
- 9. Operator shall perform an independent 72 hour well test to verify that the well can produce in paying quantities.
- 10. Submit a (Sundry Form 3160-5) subsequent report (daily reports) describing all wellbore activity and Mechanical Integrity Test. Include the date(s) of the well work and the setting depths of equipment. List (by date) descriptions of daily activity of any previously unreported wellbore workover.
- 11. Workover approval is good for 90 days (completion to be within 90 days of approval). A detailed justification is necessary for an extension of that date.

Access information for use of Form 3160-5 "Sundry Notices and Reports on Wells"

NM Fed Regs & Forms - http://www.blm.gov/nm/st/en/prog/energy/oil and gas.html

§ 43 CFR 3162.3-2 Subsequent Well Operations.

§ 43 CFR 3160.0-9 (c)(1) Information collection.

§ 3162.4-1 (c) Well records and reports.