## Form 3160-4

(October 1990)

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

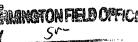
FOR APPROVED OMB NO. 1004-0137

Expires December 31, 1991 5 LEASE DESIGNATION AND SERIAL NO.

Bureau of Land ManagementSF-079049-B

		ETION OR		PLE	TION	REP	ORT AND	y L'e	Grafield O	Ce IF	INDIAN, ALLOTTE	E OR TRIBE NAME
1a TYPE OF	F WELL:	OIL.	GAS WELL	X	DRY	Other			_		· · · · · · · · · · · · · · · · · · ·	
b TYPE OF	F COMPLET	TION:								7 U	NIT AGREEMENT I	
	NEW X		PLUG BACK	7	DIFF	Other				8 F	ARM OR LEASE NA	
	WELL [2	OVER EN	BACK		RESVR	Joner			-		San Juan 2	28-6 Unit 164P
2 NAME O	F OPERATO	OR					<del></del>			9 A	PI WELL NO.	.0-0 01111 1041
В	URLING1	ON RESOURCE	ES OIL & C	GAS C	OMPAI	VY				1	30-039-305	66
		EPHONE NO.								10. 1	FIELD AND POOL,	OR WILDCAT
		39, Farmington,										anco MesaVerde
4 LOCATIO		L (Report location o	•		ce with any	y State i	requirements)*				SEC, T, FI, M, OR OR AREA	BLOCK AND SURVEY
At surfac	e Ur	nit E (SWNW) 16	85' FNL, 440	' FWL						1		DOM NATORA
			C							1	Sec. 34 120	N R6W, NMPM MAR 20 °C9
At top pro	od. interval i	reported below	Same as	abo	ve					1		
At total d	epth S	ame as above	•							{		CONS. DIV.
	•									1		DIST. 3
				14.	PERMIT I	NO.	DATE ISSUI	ED		12. (	COUNTY OR	13 STATE
							1			1	PARISH	New Mexico
15 DATE SPU	JDDED 16	DATE T D REACHE	D 17 DA	TE COM	PL. (Ready	to prod.)	<u> </u>	18. El	EVATIONS (DF, F	KB, RT,	Rio Arriba BR, ETC.)*	19 ELEV. CASINGHEAD
12	2/30/08	1/16/09		2/28/0	9 Close	ed loo	р	GL	6626'	KB	6641'	•
20. TOTAL DE	PTH, MD &T	D 21 PLUG,	BACK T.D., MD	§TVD	22. IF MUL				TERVALS	ROTAL	RY TOOLS	CABLE TOOLS
	7861'	785	. <b>4</b> 1		2	HOW N	uwiAA	1 0	RILLED BY	yes		I
24. PRODUCT		AL (S) OF THIS COMP		TTOM, N			<del>,</del>	<u></u>		lyes	25 WAS DIREC	TIONAL
					·····						SURVEY MA	ADE .
		634- 7826'					· · · · · · · · · · · · · · · · · · ·				<u> </u>	No
	CL/CBL	OTHER LOGS RUN								27. W	IS WELL CORED	A1 -
GNU	CDCBL								-	<u> </u>		No
28.	EGRADE	L WEIGHT LOVET	DEPTH OF				(Report all string					
CASING SIZ 9 5/8"	E/GHADE	WEIGHT, LB./FT.	DEPTH SET 226'	(MD)	12 1/4"	SIZE	surface; 76s		EMENTING RECO	OHD	2 bbl	MOUNT PULLED
7"		20# J-55	3691		8 3/4"				46cf-204bbls	1)	65 bbls	
4 1/2"		10.5 11.6# J5			6 1/4 <sup>8</sup>				612cf-109bb		1	
29.		LINER F	RECORD				30.			71	JBING RECORD	
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEN	MENT*	SCREE	N (MD)	SIZE		DEPTH SET	(MD)	PA	CKER SET (MD)
	<u> </u>	<del> </del>	<del> </del>				2 3/8" 4.7# J	-55	7774'		<b>}</b>	
31 PERFORA	TION RECOR	D (Interval, size and no	Imber)		32		ACI	n suc	T EBACTURE	CEME	NT SQUEEZE, E	et C
@2SPF		(			7634'- 7	826'	AOI					w/105,546 gal
7756' - 7826	6' = 24 hole	9 <b>S</b>									/40 TLC Sand	
@1SPF			•									
7634' <i>- 7</i> 740		98										
Total Holes	= 54				<del> </del>							
					<del> </del>			<del> </del>				<del></del>
33.					L		RODUCTION	L				
DATE FIRST PR					g, gas lift, pu	ımpings	ize and type of pur	<b>(</b> 0)			1	roducing or shut-in)
2/28/09 DATE OF TEST	Closed Lo	OP ( HOURS TESTED	Flow CHOKE SIZE		D'N FOR	OILB	RI	GAS-	MCE	\A/ A T	SI ER-BBL	GAS-OIL RATIO
UNIC OF IEST	į	HOUNG TESTED	OHORE SIZE		PERIOD	CIL-B	no-to-	GW2~	·w~F	}	_nbot	UNG-UIL RATIO
3/13/09		1	1/2"			1		52 m	ncf	.08 b	w	
FLOW, TUBING		CASING PRESSURE	CALCULATED		LBBL		GASMCF			WAT		OIL GRAVITY-API (CORR.)
			24-HOUR RAT	E			1					
or Diepolem	860#	783#	10.7				1248 mcf/d		1.89 bwpd		Y	
34. UISPUSIII	ION OF GAS (	Sold, used for fuel, ver	юа, etC.)								TEST WITNESSE	n RA
35. LIST OF A	TTACHMENTS	To be sold									L	
		Basin Dakota/Bla	anco Masa V	ordo w	ell heina	DHC n	er order #2067	, Δ7				
		regoing and attached i							<del></del>			
	$\dot{\lambda}$										MY	EDIEU EVO DILVA
SIGNED _ /	Maca	1 NMO	nor	me	Staff Re	gulato	ry Technician	t		DATE	No. Marchael	3/25/09
										•		-MAR 9 0 0000
		*(S	ee Instruct	ions a	and Spa	ces fo	r Additional	Data	on Reverse	Side	1)	IMMU TO THE

\*(See Instructions and Spaces for Additional Data of The Section 1001, makes it a crime for any person knowingly and willfully to make to any department of agency of the Section 1001, makes it a crime for any person knowingly and willfully to make to any department of agency of the Section 1001, makes it a crime for any person knowingly and willfully to make to any department of agency of the Section 1001, makes it a crime for any person knowingly and willfully to make to any department of agency of the Section 1001, makes it a crime for any person knowingly and willfully to make to any department of agency of the Section 1001, makes it a crime for any person knowingly and willfully to make to any department of agency of the Section 1001, makes it a crime for any person knowingly and willfully to make to any department of agency of the Section 1001, makes it a crime for any person knowingly and willfully to make to any department of agency of the Section 1001, makes it a crime for any person knowingly and willfully to make to any department of agency of the Section 1001, makes it a crime for any person knowingly and willfully to make to any department of agency of the Section 1001, makes it a crime for any person knowingly and willfully to make to any department of agency of the Section 1001, and the Section 1001 is a section 1001.





Ojo Alamo         2661'         2784'         White, cr-gr ss.         Cry sh interhedded w/tight, gry, fine-gr ss.         Gry sh interhedded w/tight, gry, fine-gr ss.         Kirtland         2784'         2784'         Allow prygry carb sh. coal, grn silts, light- Fruitland         2784'         Fruitland         3137'         Allow prygry carb sh. coal, grn silts, light- Fruitland         Fruitland         3137'         Allow pry fine grn, tight ss.         Pic.Cliffs         3410'         Allow pry fine grn st.         Lewis         3420'         Allow pry fine grn st.         Lewis         3450'         Allow pry fine grn st.         Lewis         3450'         Allow pry shale         Mesa Urde         4954'         Allow pry shale         Allow pry shale <th>  Rirtland   2784'   3137'   Cry sh interbedded w/tight, gry, fine-gr ss.   Kirtland   2784'   Fruitland   3137'   3410'   Dk gry-gry carb sh, coal, grn silts, light   Fruitland   3137'   med gry, tight, fine gr ss.   Pic.Cliffs   3410'   Ewis   3566'   Sh-Gry, fine grn, tight ss.   Pic.Cliffs   3410'   Shale w/siltstone stringers   Lewis   3566'   Shale w/siltstone stringers   Lewis   3874'   Chacra   4345'   Gry fn grn silty, glauconitic sd stone   Huerfanito Bent.   3874'   Mesa Verde   4954'   Sind gry, shale   Mesa Verde   4954'   Mesa Verde   4954'   Mesa Verde   4954'   Evis gry, med-fine gr ss, carb sh   Mesa Verde   4954'   Menefee   5200'   Foint Lookout   5570'   6083'   Med-lank gry, fine gr ss, carb sh &amp; coal   Mancos   6083'   Med-lank gry, very fine gr ss w/frequent   Gallup   6774'   Shancos   6083'   6774'   Dark gry carb sh.   Greenhorn   7540'   Greenhorn   7540'   Li gry to thr calc carb micac glauc   Dakota   7629'   Silts &amp; very fine gr gry ss w/frreg.interbed sh   Sighly calc gry sh w/thin lmst.   Graneros   7600'   Ne gry shale, fossil &amp; carb w/pyrite incl.   Li to dk gry foss carb sl calc sl silty   ss w/pyrite incl thin sh bands clay &amp; shale breaks   Sighly sighly sighly reliably   Salup shale breaks   Sighly sighly reliably   Salup shale breaks   Sighly sighly reliably   Salup shale breaks   Salup shale breaks</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>,</th> <th></th>	Rirtland   2784'   3137'   Cry sh interbedded w/tight, gry, fine-gr ss.   Kirtland   2784'   Fruitland   3137'   3410'   Dk gry-gry carb sh, coal, grn silts, light   Fruitland   3137'   med gry, tight, fine gr ss.   Pic.Cliffs   3410'   Ewis   3566'   Sh-Gry, fine grn, tight ss.   Pic.Cliffs   3410'   Shale w/siltstone stringers   Lewis   3566'   Shale w/siltstone stringers   Lewis   3874'   Chacra   4345'   Gry fn grn silty, glauconitic sd stone   Huerfanito Bent.   3874'   Mesa Verde   4954'   Sind gry, shale   Mesa Verde   4954'   Mesa Verde   4954'   Mesa Verde   4954'   Evis gry, med-fine gr ss, carb sh   Mesa Verde   4954'   Menefee   5200'   Foint Lookout   5570'   6083'   Med-lank gry, fine gr ss, carb sh & coal   Mancos   6083'   Med-lank gry, very fine gr ss w/frequent   Gallup   6774'   Shancos   6083'   6774'   Dark gry carb sh.   Greenhorn   7540'   Greenhorn   7540'   Li gry to thr calc carb micac glauc   Dakota   7629'   Silts & very fine gr gry ss w/frreg.interbed sh   Sighly calc gry sh w/thin lmst.   Graneros   7600'   Ne gry shale, fossil & carb w/pyrite incl.   Li to dk gry foss carb sl calc sl silty   ss w/pyrite incl thin sh bands clay & shale breaks   Sighly sighly sighly reliably   Salup shale breaks   Sighly sighly reliably   Salup shale breaks   Sighly sighly reliably   Salup shale breaks   Salup shale breaks						,	
Kirtland   2784   3137   Gry sh interbedded w/tight, gry, fine-gr ss.   Kirtland   2784	Rirtland   2784'   3137'   Cry sh interbedded w/tight, gry, fine-gr ss.   Kirtland   2784'   Fruitland   3137'   3410'   Dk gry-gry carb sh, coal, grn silts, light   Fruitland   3137'   med gry, tight, fine gr ss.   Pic.Cliffs   3410'   Ewis   3566'   Sh-Gry, fine grn, tight ss.   Pic.Cliffs   3410'   Shale w/siltstone stringers   Lewis   3566'   Shale w/siltstone stringers   Lewis   3874'   Chacra   4345'   Gry fn grn silty, glauconitic sd stone   Huerfanito Bent.   3874'   Mesa Verde   4954'   Sind gry, shale   Mesa Verde   4954'   Mesa Verde   4954'   Mesa Verde   4954'   Evis gry, med-fine gr ss, carb sh   Mesa Verde   4954'   Menefee   5200'   Foint Lookout   5570'   6083'   Med-lank gry, fine gr ss, carb sh & coal   Mancos   6083'   Med-lank gry, very fine gr ss w/frequent   Gallup   6774'   Shancos   6083'   6774'   Dark gry carb sh.   Greenhorn   7540'   Greenhorn   7540'   Li gry to thr calc carb micac glauc   Dakota   7629'   Silts & very fine gr gry ss w/frreg.interbed sh   Sighly calc gry sh w/thin lmst.   Graneros   7600'   Ne gry shale, fossil & carb w/pyrite incl.   Li to dk gry foss carb sl calc sl silty   ss w/pyrite incl thin sh bands clay & shale breaks   Sighly sighly sighly reliably   Salup shale breaks   Sighly sighly reliably   Salup shale breaks   Sighly sighly reliably   Salup shale breaks   Salup shale breaks							
Kirtland   2784   3137'   Cry sh interbedded w/cight, gry, fine-gr ss.   Kirtland   2784'   Fruitland   3137'   Dk gry-gry carb sh, coal, grn silts, light   Fruitland   3137'   med gry, tight, fine gr ss.   Pic.Cliffs   3410'   Section   Sectio	Rirtland   2784'   3137'   Cry sh interbedded w/tight, gry, fine-gr ss.   Kirtland   2784'   Fruitland   3137'   3410'   Dk gry-gry carb sh, coal, grn silts, light   Fruitland   3137'   med gry, tight, fine gr ss.   Pic.Cliffs   3410'   Ewis   3566'   Sh-Gry, fine grn, tight ss.   Pic.Cliffs   3410'   Shale w/siltstone stringers   Lewis   3566'   Shale w/siltstone stringers   Lewis   3874'   Chacra   4345'   Gry fn grn silty, glauconitic sd stone   Huerfanito Bent.   3874'   Mesa Verde   4954'   Sind gry, shale   Mesa Verde   4954'   Mesa Verde   4954'   Mesa Verde   4954'   Evis gry, med-fine gr ss, carb sh   Mesa Verde   4954'   Menefee   5200'   Foint Lookout   5570'   6083'   Med-lank gry, fine gr ss, carb sh & coal   Mancos   6083'   Med-lank gry, very fine gr ss w/frequent   Gallup   6774'   Shancos   6083'   6774'   Dark gry carb sh.   Greenhorn   7540'   Greenhorn   7540'   Li gry to thr calc carb micac glauc   Dakota   7629'   Silts & very fine gr gry ss w/frreg.interbed sh   Sighly calc gry sh w/thin lmst.   Graneros   7600'   Ne gry shale, fossil & carb w/pyrite incl.   Li to dk gry foss carb sl calc sl silty   ss w/pyrite incl thin sh bands clay & shale breaks   Sighly sighly sighly reliably   Salup shale breaks   Sighly sighly reliably   Salup shale breaks   Sighly sighly reliably   Salup shale breaks   Salup shale breaks						-	
Rirtland   284   3137   Gry sh interbedded w/tight, gry, fine-gr ss.   Kirtland   2784	Rirtland   2784'   3137'   Cry sh interbedded w/tight, gry, fine-gr ss.   Kirtland   2784'   Fruitland   3137'   3410'   Dk gry-gry carb sh, coal, grn silts, light   Fruitland   3137'   med gry, tight, fine gr ss.   Pic.Cliffs   3410'   Ewis   3566'   Sh-Gry, fine grn, tight ss.   Pic.Cliffs   3410'   Shale w/siltstone stringers   Lewis   3566'   Shale w/siltstone stringers   Lewis   3874'   Chacra   4345'   Gry fn grn silty, glauconitic sd stone   Huerfanito Bent.   3874'   Mesa Verde   4954'   Sind gry, shale   Mesa Verde   4954'   Mesa Verde   4954'   Mesa Verde   4954'   Evis gry, med-fine gr ss, carb sh   Mesa Verde   4954'   Menefee   5200'   Foint Lookout   5570'   6083'   Med-lank gry, fine gr ss, carb sh & coal   Mancos   6083'   Med-lank gry, very fine gr ss w/frequent   Gallup   6774'   Shancos   6083'   6774'   Dark gry carb sh.   Greenhorn   7540'   Greenhorn   7540'   Li gry to thr calc carb micac glauc   Dakota   7629'   Silts & very fine gr gry ss w/frreg.interbed sh   Sighly calc gry sh w/thin lmst.   Graneros   7600'   Ne gry shale, fossil & carb w/pyrite incl.   Li to dk gry foss carb sl calc sl silty   ss w/pyrite incl thin sh bands clay & shale breaks   Sighly sighly sighly reliably   Salup shale breaks   Sighly sighly reliably   Salup shale breaks   Sighly sighly reliably   Salup shale breaks   Salup shale breaks				, , , , , , , , , , , , , , , , , , ,		•	
Kirtland 2784 3137' Gry sh interbedded w/tight, gry, fine-gr ss. Kirtland 2784' Fruitland 3137' Dk gry-gry carb sh, coal, grn silts, light- Fruitland 3137' med gry, tight, fine gr ss.  Pictured Cliffs 3410' 3566' Bn-Gry, fine grn, tight ss. Pic.Cliffs 3410' Section 31566' Shale w/siltstone stringers Lewis 3566' Huerfanito Bentonite 3874' 4345' White, waxy chalky bentonite Huerfanito Bent. 3874' Chacra 4345' Gry fn grn silty, glauconitic sd stone Chacra 4345' Work gry shale Mesa Verde 4954' Suo' Koal Med-fine gr ss, carb sh Menefee 5200' S coal Light gry, med-fine gr ss, carb sh & coal Mancos 583' Med-light gry, very fine gr ss w/frequent Gallup 6774' Show Show Forth Lookout 5570' Med-dark gry, fine gr ss, carb sh & coal Mancos 6083' Med-light gry, very fine gr ss w/frequent Gallup 6774' Show Show Show Show Forth Lookout 5770' Dark gry carb sh. Graneros 7600' Gallup 6774' 7540' Light y carb sh. Graneros 7600' Bakota 7629' Silts & very fine gr gry ss w/irreg.interbed sh Highly calc gry sh w/chin lmst.  Graneros 7600' 7629' Dk gry shale, fossil & carb w/pyrite incl.  Lit to dk gry foss carb sl calc sl silty ss w/pyrite incl thin sh bands clay & shale breaks	Fruitland   2784   3137   3410   Dk gry-gry carb sh, coal, grn silts, light   Fruitland   3137   3410   Dk gry-gry carb sh, coal, grn silts, light   Fruitland   3137   med gry, tight, fine gr ss.   Pic.Cliffs   3410   S66   Bn-Gry, fine grn, tight ss.   Pic.Cliffs   3410   S66   Bn-Gry, fine grn, tight ss.   Pic.Cliffs   3410   S66   Bn-Gry, fine grn, tight ss.   Dic.Cliffs   3410   S66   S66   S674   S66   S612   S66	Oio Alamo	2661′	2784′	White, cr-gr ss.	Ojo Alamo	2661′	
Pruitland   3137   3410   3137   3410   med gry, tight, fine gr ss.   Pic.Cliffs   3410   3566   Bn-Gry, fine gr n. tight ss.   Pic.Cliffs   3410   3566   Bn-Gry, fine gr n. tight ss.   Pic.Cliffs   3410   Shale w/siltstone stringers   Lewis   3566   3874   Shale w/siltstone stringers   Lewis   3566   Shard   Shale w/siltstone stringers   Lewis   3410   Shard   Shale w/siltstone stringers   Lewis   3566   Shard   Shard   Shale w/siltstone stringers   Lewis   3410   Shard	Pruitland   3137'   3410'   Dk gry-gry carb sh. coal, grn silts, light-med gry, tight, fine gr ss.		2784′	3137'	Gry sh interbedded w/tight, gry, fine-gr ss.	Kirtland	2784′	
Pictured Cliffs	Pictured Cliffs				Dk gry-gry carb sh, coal, grn silts, light-	Fruitland	3137'	
Lewis 3566 3874' Shale w/siltstone stringers Lewis 3566 Huerfanito Bentonite 3874' 4345' White, waxy chalky bentonite Huerfanito Bent. 3874' 24345' White, waxy chalky bentonite Chacra 4345' Worder 4954' 5200' By fing rn silty, glauconitic sd stone Chacra 4345' Mesa Verde 4954' 5200' Light gry, med-fine gr ss, carb sh Menefee 5200' 5570' Med-dark gry, fine gr ss, carb sh coal Menefee 5200' 56081' Med-light gry, very fine gr ss w/frequent Gallup 6774' Sh breaks in lower part of formation Greenhorn 7540' Callup 6774' 7540' Lt gry to brn calc carb micac glauc Silts & very fine gr gry ss. w/irreg.interbed sh Highly calc gry sh w/thin Inst.  Graenborn 7540' 7600' Dk gry shale, fossil & carb w/pyrite incl.  Lt to dk gry foss carb sl calc sl silty ss w/pyrite incl thin sh bands clay & shale breaks	Lewis 3566' 3874' 4345' White, waxy chalky bentonite Huerfanito Bent. 3874' 4345' White, waxy chalky bentonite Huerfanito Bent. 3874' 4345' White, waxy chalky bentonite Chacra 4345' 4954' White, waxy chalky bentonite Galton Chacra 4345' Widzk gry shale Mesa Verde 4954' Mesa Verde 6781' Med-dark gry, fine gr ss, carb sh & coal Mancos 6083' Med-light gry, very fine gr ss w/frequent Gallup 6774' Sh breaks in lower part of formation Greenhorn 7540' Mancos 6083' 6774' Dark gry carb sh. Graneros 7600' Gallup 6774' 7540' Lt gry to brn calc carb micac glauc Dakota 7629' Sitts & very fine gr gry ss.w/irreg.interbed sh Graneros 7600' 7629' Dk gry shale, fossil & carb w/pyrite incl. Lt to dk gry foss carb sl calc sl silty ss w/pyrite incl thin sh bands clay & shale breaks	Pictured Cliffs	3410′	3566′		Pic.Cliffs	′ 3410'	
Huerfanito Bentonite 3874' 4345' Mhite, waxy chalky bentonite Huerfanito Bent. 3874' Chacra 4345' Gry fn grn silty, glauconitic sd stone Chacra 4345' w/drk gry shale Mesa Verde 4954' Mesa Verde 4954' E200' Light gry, med-fine gr ss, carb sh Menefee 5200' & coal Point Lookout 5570' Med-dark gry, fine gr ss, carb sh & coal Mancos 6083' Med-light gry, very fine gr ss w/frequent Gallup 6774' Sh breaks in lower part of formation Greenhorn 7540' Mancos 6083' G774' Dark gry carb sh. Graneros 7600' Gallup 6774' 7540' Lt gry to brn calc carb micac glauc Dakota 7629' Silts & very fine gr gry ss w/irreg.interbed sh Highly calc gry sh w/thin lmst.  Graneros 7600' 7629' Dk gry shale, fossil & carb w/pyrite incl. Lt to dk gry foss carb sl calc sl silty ss w/pyrite incl thin sh bands clay & shale breaks	Huerfanito Bentonite 3874' 4345' White, waxy chalky bentonite Huerfanito Bent. 3874' Chacra 4345' Gry fn grn silty, glauconitic sd stone Weak Verde 4954' Mesa Verde 5200' & Light gry, med-fine gr ss, carb sh Menefee 5200' Med-dark gry, fine gr ss, carb sh & coal Mancos 5083' Med-light gry, very fine gr ss w/frequent Gallup 6774' Sh breaks in lower part of formation Greenhorn 7540' Mark gry carb sh. Graneros 7600' Dark gry carb sh. Graneros 7600' Dark gry ss. w/irreg.interbed sh Highly calc gry sh w/thin lmst. Graneros 7600' 7629' Dk gry shale, fossil & carb w/pyrite incl. Lt to dk gry foss carb sl. calc sl slity ss w/pyrite incl thin sh bands clay & shale breaks					Lewis	→ 3566′°	
Chacra         4345'         4954'         Gry fn grn silty, glauconitic sd stone w/drk gry shale         Chacra         4345'           Mesa Verde         4954'         5200'         Light gry, med-fine gr ss, carb sh         Mesa Verde         4954'           Menefee         5200'         5570'         Med-dark gry, fine gr ss, carb sh & coal         Mancos         6083'           Point Lookout         5570'         6083'         Med-light gry, very fine gr ss w/frequent         Gallup         Gallup         6774'         Dark gry carb sh.         Graneros         7600'           Gallup         6774'         7540'         Lt gry to brn calc carb micac glauc         Dakota         7629'           Greenhorn         7540'         7600'         Highly calc gry sh w/thin lmst.         Highly calc gry sh w/thin lmst.         Graneros         7600'           Graneros         7600'         7629'         Dk gry shale, fossil & carb w/pyrite incl.         Lt to dk gry foss carb sl calc sl silty           Dakota         7629'         Lt to dk gry foss carb sl calc sl silty         ss w/pyrite incl thin sh bands clay & shale breaks	Chacra 4345' 4954' Gry fin grn silty, glauconitic sd stone w/drk gry shale Mesa Verde 4954' Mesa Verde 4954' Mesa Verde 4954' S200' & Coal Menefee 5200' 5570' Med-dark gry, fine gr ss, carb sh & Coal Mancos 6083' Point Lookout 5570' 6083' Med-light gry, very fine gr ss w/frequent Gallup 6774' sh breaks in lower part of formation Graenhorn 7540' Gallup 6774' 7540' Lt gry to brn calc carb micac glauc Dakota 7629' Silts & very fine gr gry ss.w/irreg.interbed sh Graencos 7600' 7629' Dk gry shale, fossil & carb w/pyrite incl. Lt to dk gry foss carb sl calc sl silty ss w/pyrite incl thin sh bands clay & shale breaks		3874′	4345′	White, waxy chalky bentonite	Huerfanito Bent.	. ′ 3874′	
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## Form 3160-4

(October 1990)

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

FOR APPROVED MATERIAL 2009

OMB NO 1004-0137 Expires December 31, 1991

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34 DISPOSIT	ION OF GAS	Sold, used	for fuel, vent	ed, etc.)						<del></del>		TEST WITNESSE	O BY	-
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Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department of agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.





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	Ojo Alamo	2661'	2784′	White, cr-gr ss.	Ojo Alamo	2661
	Kirtland	2784′	3137′	Gry sh interbedded w/tight, gry, fine-gr ss.	Kirtland	2784
	Fruitland	3137′	3410′	Dk gry-gry carb sh, coal, grn silts, light- med gry, tight, fine gr ss.	Fruitland	3137
	Pictured Cliffs	3410′	3566′	Bn-Gry, fine grn, tight ss.	Pic.Cliffs	3410
	Lewis	3566′	3874'	Shale w/siltstone stringers	Lewis	3566
	Huerfanito Bentonite	3874′	4345'	White, waxy chalky bentonite	Huerfanito Bent.	3874
	Chacra	4345′	4954'	Gry fn grn silty, glauconitic sd stone	Chacra	4345
				w/drk gry shale	Mesa Verde	4954
	Mesa Verde	4954'	5200′	Light gry, med-fine gr ss, carb sh	Menefee	5200
				& coal	Point Lookout	5570
	Menefee	5200′	5570'	Med-dark gry, fine gr ss, carb sh & coal	Mancos	6083
	Point Lookout	5570'	6083'	Med-light gry, very fine gr ss w/frequent	Gallup	6774
				sh breaks in lower part of formation	Greenhorn	7540
	Mancos	6083′	6774′	Dark gry carb sh.	Graneros	7600′
-	Gallup	6774'	7540′	Lt gry to brn calc carb micac glauc	Dakota	7629′
,				silts & very fine gr gry ss w/irreg.interbed sh		
,	Greenhorn	7540′	7600′	Highly calc gry sh w/thin lmst.		
	Graneros	7600′	7629'	Dk gry shale, fossil & carb w/pyrite incl.		
	Dakota	7629′		Lt to dk gry foss carb sl calc sl silty		
	•			ss w/pyrite incl thin sh bands clay & shale break	<s< td=""><td></td></s<>	

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