HUNTINGTON ENERGY, LLC CANYON LARGO UNIT #487 LOCATION Section 15, T25N – R6W Rio Arriba County, New Mexico





36°25'00"

36°24'00"

HUNTINGTON ENERGY, LLC CANYON LARGO UNIT #487 LOCATION Section 15, T25N – R6W Rio Arriba County, New Mexico



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	APDP:	(\cdot)			•		
•	SMA:	14 - L				1 1 1	
	BOND:				1		· .
Form 3160-3 September 2001)	LAVPA:					FURM APPRO OMB No. 1004 Expires Jebuary J	VED -0136 1, 2004
	DEP	UNITED STAT	LES F INTERIOR		0 00	S. Lease Strial No.	
	<u> </u>	REAU OF LAND MA	NAGEMENT	2005 DEU	6 111	12 SF 078884	
	APPLICATION	FOR PERMIT TO	DRILL OR RE	ENTER RE	CEIVED	6. If Indian, Allottee or T	ribe Name
				OTO FAT	13.11/51	7. If Unit or CA Agreemer	L Name and No.
Ia. Type of World	K: AL DRILL	LI REE	NTER		l.	Canyou Largo	Unit
						8. Lease Name and Well N	ło.
1b. Type of Wel		Gas Well C Other	Sir	igle Zone U Multi	iple Zone	Canyon Largo	<u>Unit 487</u>
2. Name of Ope	calor					9. API Well No. 7.	1717
Huntin	igton Energy,	Blvd Sulte	400 1b. Phone No	(include area code)		10 Field and Bool or Each	
	ahoma City.	OK 73118	(405)	840-9876		Basin Dakota	a
4 1 0000 000	Well (Report location (learly and in accordance	with any State reave	rements.*)		11. Sec., T., R., M., or Bik.	and Survey or Area
At surface	SENU Lot	F 1445' FNI.	& 2105' FWT			Sec 15, T25	N-R6W
A Samanad	DENW, LUL	1 1442 1111	~ ~ ~ · · · · · · · · · · · · · · · · ·	•			
	prod. zone			·		12 Course Proch	111 5000
1→. Uistance III M 3,5 m i 1	les SE from I	lanco. NM	LE '			Rio Arriba	NM
15. Distance from	n proposed*		16. No of	Acres in lease	17 5000	I linit dedicated to this well	
location to no	carest				11. Space		
(Also to near	rest drig, unit line, if an	۲)				,	
13. Distance from	n proposed location*		19. Ргором	d Depth	20. BLM	/BIA Bond No. on file	·····
to nearest we applied for, o	il, drilling, completed, in this lease, fL			- 1	NME	3000076	
11 51	Shaw whether DE KE	B BT CL att)	730	0 ¹			
	5641 CL			Innate Gate work with	2020-	23. Esumated duration	
	<u> </u>		74 AH	chments	<u> </u>		e
72		with the manufacture of	0	· Order Mail and Mail			
The lollowing. co	impleted in accordance	with the requirements of	Unshore Oil and Un	s Order No.1, shall be	attached io U	his form:	
1. Well plat cert	afied by a registered su	rveyor.		4. Bond to cove	er the operat	ions unless covered by an ex	isting bond on file (se
2. A Drilling Pla	an. No Rise (if the location	n is an National Same	Cuntana I anda aka	S. Ormator cert	e). ilication.		
SUPO shall I	be filed with the approp	riste Forest Service Offi	ce).	6. Such other s	ite specific i	nformation and/or plans as i	may be required by th
	A			authorized of	Ticer.		
25. Signature			Nam	e (Printed/Typed)	1.1	D	^a 12/1/05
	anun	emin		acherine Sm	100		12/1/05
Land	Associate						
Approved by (Si	endiure) 1	· · · · ·	. Nac	ne (Printed/Typed)		· · ·	
\sim	Anna lada	b	1				7/1/06
Tille		<u></u>	101	īce		•	
	Adding A	fm					
Application appr	ovat does nut warrant o	or certify the the applican	t holds legal or equit	able title to those right	ts in the subje	ct lease which would entitle	the applicent to conduc
Conditions of ap	proval, if any, are allac	hed.					
The 19 115 C	Section 1001 and Title	43.11 . C. Section 1717	make it a crime for				
States any false,	fictitious or fraudulent	statements or representa	tions as to any matter	within its jurisdiction	iy and willful n.	iy to make to any departiment	coragency of the Uni
*(Instructions o	n reverse)						
						A 15 20 27 2	223
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PPI I I I		UNDITED ADE		tinet to technical ar	nd		18° - 29
- DRILLI SUBJE	ING OPERATIONS AUT	MITH ATTACHED	This action is s	ubject to technic 43 Cl	FR 3105.3	EDILLA	27
GENE	RAL REQUIREMENTS	• ●	and appeal pu	rsuant to 43 CFH 310			
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P.O. Box 1980, Hobb	e, N.M. 88	241-1980	Ener	SLi gy. Minera	ale of New Is & Natural R	MCXICO	nt	1	Reviewd	Form C-102
DISTRICT II 1301 W. Grand Areas	ue, Artesia	, n. m. 88 210)	OIL CO	NSERVATIO	N DIVISION) Subm	it to Ap St	Instruct propriate ate Leas	tions on back District Offic se - 4 Copies
1000 Rio Brazos Rd.	, Artec, N.	M. 87410		1220) South St. F	rancis Dr.		1	Fee Leas	e - 3 Copies
DISTRICT IV 1220 South St. Fran	acis Dr., Se	unta Fe, NM 8	37505	San	ta Fe, NM 87	504-2088 2005 DEC Б	PF 12 4	8 🗆	AMEND	ED REPORT
		γ	VELL L	OCATIO	N AND AC	REAGE DEDA	CATION P	LAT		
1 API	Number			71590		070 FAR	111 U Pool Na	De		
* Property Co	xde			11373	*Property	Name .	Basin Dal	cota	• ¥	II Number
6886				c	ANYON LARGO	UNIT				487
OGRID No.	•				*Operator	Name			·	Elevation
208706	1	·		HL	INTINGTON EN	ERGY, LLC			6	564'
	0	To making 1			¹⁰ Surface	Location				·····
F	15	25-N	6-W	Lot Idn	Peet from the 1445'	North/South line NORTH	Feet from the 2105'	East/V	est line ST	County RIO ARRIBA
		.	¹¹ Botto	om Hole	Location	If Different Fro	om Surface			
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/W	est line	County
" Dedicated Acre	•	L	18 Joint or	Infili	¹⁴ Consolidation	Code	"Order No			
DK - W	/320									
NO ALLOW	ABLE W	ILL BE A	SSIGNEE	TO TH	S COMPLETI	ON UNTIL ALL	INTERESTS	HAVE E	PEN CO	NEOLDATED
16		ORAN	ION-STA	NDARD I	UNIT HAS BI	EEN APPROVED	BY THE D	INVE E	DEEN CC	INSOLIDATED
TFD 3 1/4" B.L.M. BC 1955	N 89-1 2626.9	1440 E 9' (C)	1445'	CALC'D FROM 1 40 LKS FND. 1 3 1/4	CORNER N.C. 5 SOUTH 955 7 BLM BC		17 J Aereb Ss brue betief	OPERA y certify that and complete	TOR CE the informa to the best	ERTIFICATION Non contained hervin of my knowledge and
U (2) 97 - 200 2 CALC'D CORN FROM W.C. 60 LKS SOUT FND. 1955 3 1/4" BLM	- ER H BC	2105' LAT: 36 LONG:	5'24.1766	15) 27) NAD 27)		Cortuned Carunte Ca Printe La Title Oc Date 18 Carunte Cortune Carunte Carunte Carunte Carunte Carunte	therine therine nd Asso tober I SURVEY SURVEY SURVEY to be ber to be be to be ber to b	e Smith ociate 3, 200 OR CER notes of act of my order of my order	TIFICATION for shown on this plat wat surveys made by that the some is true f

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Submit 3 Conjes To Appropriate District	State of N	Jew Mexico			$Form C_{-103}$
Office	Energy Minorolo o	nd Natural Dass			FOIIII C=105
District 1	Energy, Minerals a	no matural rest		LADINO	May 27, 2004
1625 N. French Dr., Hobbs, NM 88240			WEL 24	L API NO.	
District II 1201 W. Grand Ave. Artesia, NM 88210	OIL CONSERV	ATION DIVIS	SION $\frac{30}{5}$	1-039-29717	
District III	1220 South	St. Francis Dr.	5. In	dicate Type of Lease	57
1000 Rio Brazos Rd., Aztec, NM 87410	Santa Fe	NM 87505	<u> </u>	STATE	FEE X
District IV	Santa i C	, 14141 07505	6. Si	late Oil & Gas Lease	No.
1220 S. St. Francis Dr., Santa Fe, NM 87505			S	SF 078884	
SUNDRY NOTIC	ES AND REPORTS ON	WELLS	7 1	ease Name or Unit A	greement Name
(DO NOT USE THIS FORM FOR PROPOSA	LS TO DRILL OR TO DEEP	EN OR PLUG BACK		and Name of Omit A	Biccilicite Name
DIFFERENT RESERVOIR. USE "APPLICA	TION FOR PERMIT" (FORM	C-101) FOR SUCH		myon Largo Onit	
PROPOSALS.)			8 11	Vall Number 497	
1. Type of Well: Oil Well 📋 G	as Well 🛛 Other		0. V	ven Number 48/	
2. Name of Operator			9. C	GRID Number	
Huntington Energy, L.L.C.			2	208706	
3. Address of Operator			10.	Pool name or Wildca	t
6301 Waterford Blvd., Suite 400, C	Oklahoma City, OK 731	18		Basin Dakota	
4 Well Location					
		line and 2106	for a for a		
Unit Letter_F_:1445_16	et nom theNorun	line and _2105	_leet from the	West_line	
Section 15 Township	<u>o 25N Range 6W</u>	NMPM	Rio	Arriba County	
황사가 이 것 이 가지 않는 것	11. Elevation (Show wh	ether DR, RKB, I	RT, GR, etc.)	and the second sec	
	6564' GL				
Pit or Below-grade Tank Application 🛛 or	<u>Closure</u>				
Pit type_Drilling_Depth to Groundwater_	_1000'_Distance from near	est fresh water well	>12000' Distance fr	om nearest surface wate	r 600'
Dit Liner Thielmerry 12 mil Below		N/A bble: Ce	notemation Mass 11		
TR Liner Finickness. 12 mit Delov	-Grade raik. Volume		astruction Material		
	ENTION TO: PLUG AND ABANDON CHANGE PLANS		SUBSEC EDIAL WORK MENCE DRILLING		OF: RING CASING []
PULL OR ALTER CASING	MULTIPLE COMPL	CASI	NG/CEMENT JOE		
OTHER: Drilling Pit			<u>R:</u>		
Describe proposed or complete	eted operations. (Clearly	y state all pertiner	it details, and give	pertinent dates, inclu	uding estimated date
of starting any proposed wor or recompletion.	k). SEE RULE 1103. F	For Multiple Com	pletions: Attach v	wellbore diagram of p	roposed completion
Huntington Energy, L.L.C. p	proposes to construct a re	eserve pit in orde	to drill the subject	ct well. Huntington E	inergy anticipates
constructing and closing the	pit according to the gen	eral pit permit rec	uirements on file	at the NMOCD offic	e.
	·				
I hereby certify that the information a grade tank has been/will be constructed or	bove is true and comple closed perfording to NMOCD	te to the best of r guidelines 🔀, a ger	ny knowledge and eral permit 🗌 or an	belief. I further certif (attached) alternative O	y that any pit or below- CD-approved plan .
SIGNATURE (athenne	Smith	_ TITLE Land	Associate	DATE Febru	ary 9, 2006
Type or print name Cathening Smith	ь <u>г</u>				
For State Use Only	n E-mail address:	csmith@hunting	tonenergy.com	Telephone No. ((405) 840-9876

APPROVED BY: Conditions of Approval (if any):

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- 11		
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OPERATIONS PLAN

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	Rio Arriba Count	y, NM			
ormation:	Basin Dakota				
elevation:	0804 GL				
Competing Trans		Tom	Dottom		
Surface		Son Jose	1073'		
Surface		1022	2003		
Ojo Alamo Kialaland		2002	2095		
Envitland		2095.	· 2515		
Pictured Cliffe		2515	2580		
Fictureu Chris		2500	2004		
Lewis Shale		2004	290J 4120'		
		41207	4123		
Manafaa		4127	4212		
Nichelee Daint Lagland		4212	4031		
		4031	5085		
Mancos Collum (Michaene)		2002	6020		
Gailup (Niobrara)		6020	60017		
Greenhorn		0017 2004	6024		
Graneros		0004	0924		
Dakola		7200	7500		
Morrison		7300			
10		7400			
Logging Program:	ne				
Cased Hole	5110 PST - TT) to 5000'.	CBI /GP	- TD to 5700'		
Corec & DST'	101 - 10103900,	CDL/OK	- 10 10 5700		
Mud log - TD	s = 1000				
Mud log - 1D	10 5900				
Mud Program:	æ		17	F1 / 1 T	
Interval 0 2202	<u>1 ype</u>	weight	$\frac{V_{1S.}}{40.60}$	Fluid L	<u>OSS</u>
$0 - 320^{\circ}$	Spua	8.4-8.9	40-50		101
320 - 7400	LSND	8.4-9.0	40-60	8-12	
Pit levels will	be visually monitor	ed to detec	t gain or loss of	fluid cont	rol.
I II ICVCIS WIII					
Casing Program:			Cen Size	Wt.	Grade
Casing Program: Hole Size	Depth Interval		<u>C3g. 5120</u>		
Casing Program: <u>Hole Size</u> 12 '4''	Depth Interval 0' – 320'		<u>8 5/8"</u>	24.0#	WC-50
Casing Program: Hole Size 12 ¼" 7 7/8"	<u>Depth Interval</u> 0' - 320' 0' - 7400'		8 5/8" 4 ½""	24.0# 11.6#	WC-50 N-80
<u>Casing Program:</u> <u>Hole Size</u> 12 ¼" 7 7/8" <u>Tubing Program:</u>	<u>Depth Interval</u> 0' - 320' 0' - 7400'		8 5/8" 4 ½""	24.0# 11.6#	WC-50 N-80

11" 3000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out surface casing, tams and casing will be tested to 600 psi for 30 minutes.

2" nominal, 3000 psi minimum choke manifold (Reference Figure #3).

Operations Plan – Canyon Largo Unit #464

Page Two

Completion Operations:

6" 3000 psi double gate BOP stack (Reference Figure #2). After nipple-up prior to completion, pipe rams and casing top will be tested to 3000 psi for 15 minutes.

Surface to Total Depth:

2" nominal, 3000 psi minimum choke manifold (Reference Figure #3).

Wellhead:

8 5/8" x 4 ¹/₂" x 1 ¹/₂" x 1 ¹/₂" x 3000 psi tree assembly.

General:

- Pipe rams will be actuated once each day and blind rams will be actuated once each trip to test proper functioning.
- An upper Kelly cock valve with handle available and drill string valves to fit each drill string will be available on the rig floors at all times.
- A BOP pit level drill will be conducted weekly for each drilling crew.
- All of the BOP tests and drills will be recorded in the daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

Cementing:

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8 5/8" surface casing -

Cement to surface w/265 sx Class "B" cement w/3% calcium chloride and $\frac{1}{4}$ "/sx cellophane flakes (312 cu. ft. of slurry, 200% excess to circulate to surface). WOC 8 hr. prior to drilling out surface casing. Test casing to 600 psi for 30 minutes.

Saw tooth guide shoe on bottom. Bowspring centralizers will be run in accordance with Onshore Order #2.

Production Casing $-4\frac{1}{2}$ "

Lead with 700 sx 65/35 Standard Poz w/6% gel, ¼# Flocele, 10# Gilsonite, 3/10% Halad 9, 1/10% HR5 (1.96 yld). Tail w/900 sx 50/50 Standard Poz w/35 Gel, 9/10% Halad9, 2/10% CFR 3, 5# Gilsonite, ¼# Flocele (1.47 yld).

Alternate Two-stage cement job as follows:

First Stage: Cement to circulate to stage tool @ 5066'. Lead with 700 sx Class "G" 50/50 poz (13#, 1.47 yd) w/3% gel, 0.25 pps Celloflake, 5 pps Gilsonite, 0.25 pps Fluid loss, 0.15% dispersant, 0.1% retarder. WOC 4 hours prior to pumping second stage. (Slurry volume: 1029 cu. ft. Excess slurry: 50%). DV Tool at 5000 ft.

Second Stage: Cement to circulate to surface. Cement with 700 sx Class "G" (12#, 2.9yd) TXI Liteweight cement w/2.5% sodium metasilicate, 2% calcium chloride, 10 pps Gilsonite, 0.5 pps Celloflake, 0.2% antifoam. WOC a minimum of 18 hours prior to cleanout. (Slurry volume: 1914 cu. ft. Excess slurry: 50%). Tail w/50 sx Class "B" w/1/4# Flocele (15.6#, 1.18 yd), (Slurry 59 cu. ft., Excess 50%).

Float shoe on bottom. Three centralizers run every other joint above shoe. Thirty-five centralizers - one every 4^{th} joint to the base of the Ojo Alamo @ 2448'. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 2448'. Standard centralizers thereafter every fourth joint up to the base of the surface pipe.

Note: If open hole logs are run, cement volumes will be based on 25% excess over caliper volumes.

Operations Plan - Canyon Largo Unit #464

Page Three

Additional Information:

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The Dakota formations will be completed.

- No abnormal temperatures or hazards are anticipated.
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The east half of the Section 15 is dedicated to this well.
- This gas is dedicated.
- Anticipated pore pressure

-300 psi
500 psi
700 psi
3000 psi

OPERATIONS PLAN

Well Name: Location:

Formation:

Elevation:

Canyon Largo Unit #487 1445' FNL, 2105' FWL, NW/4 Sec 15, T-25-N, R-6-W NMPM Rio Arriba County, NM Basin Dakota 6564' GL ÷.,

Formation Tops:	Top	Bottom	RMSL	
Ojo Alamo	1965'	2165'	4615	
Kirkland	2165'	2385'	4415	
Fruitland	2385'	2605'	4195	
Pictured Cliffs	2605'	2635'	3975	
Lewis Shale	2635'	2980'	3945	
Huerfanito	2980'	4175'	3600	
Cliff House	4175'	4235'	2405	
Menefee	4235'	4790'	2345	
Point Lookout	4790'	5145'	1790	
Mancos	5145'	5958'	1435	
Gallup (Niobrara)	5958'	6720'	622	
Greenhorn	6720'	6784'	-140	
Graneros	6784*	6840'	-204	
Dakota	6840'	7170'	-260	
Morrison	7170'	7300'	-590	
TD	7300'			

Logging Program:

Open hole logs - None Cased hole logs - RST - TD to 5900'; CBL/GR - TD to 5800' Cores & DST's - none Mud log - 3200' to TD

Mud Program:

1.

<u>Interval</u>	Type	<u>Weight</u>	<u>Vis.</u>	Fluid Loss
0 – 320'	Spud	8.4-8.9	40-50	no control
320 – 7300'	LSND	8.4-9.0	40-60	8-12

Pit levels will be visually monitored to detect gain or loss of fluid control.

Casing Program:				
Hole Size	Depth Interval	<u>Csg. Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - 320'	8 5/8"	24.0#	WC-50
7 7/8"	0' - 7300'	4 1/2""	11.6#	N-80
Tubing Program:				
	0' – 7300'	2 3/8"	4.7#	J-55

BOP Specifications, Wellhead and Tests:

Surface to TD -11" 3000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out surface casing, rans and casing will be tested to 600 psi for 30 minutes.

2" nominal, 3000 psi minimum choke manifold (Reference Figure #3).

Operations Plan – Canyon Largo Unit #487

Page Two

Completion Operations:

6" 3000 psi double gate BOP stack (Reference Figure #2). After nipple-up prior to completion, pipe rams and casing top will be tested to 3000 psi for 15 minutes.

Surface to Total Depth:

2" nominal, 3000 psi minimum choke manifold (Reference Figure #3).

Wellhead:

8 5/8" x 4 ¹/₂" x 1 ¹/₂" x 3000 psi tree assembly.

General:

3

- Pipe rams will be actuated once each day and blind rams will be actuated once each trip to test proper functioning.
- An upper Kelly cock value with handle available and drill string values to fit each drill string will be available on the rig floors at all times.
- A BOP pit level drill will be conducted weekly for each drilling crew.
- All of the BOP tests and drills will be recorded in the daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

Cementing:

8 5/8" surface casing -

Cement to surface w/265 sx Class "B" cement w/3% calcium chloride and ¼#/sx cellophane flakes (312 cu. ft. of slurry, 200% excess to circulate to surface). WOC 8 hr. prior to drilling out surface casing. Test casing to 600 psi for 30 minutes.

Saw tooth guide shoe on bottom. Bowspring centralizers will be run in accordance with Onshore Order #2.

Production Casing $-4 \frac{1}{2}$ "

Lead with 700 sx 65/35 Standard Poz w/6% gel, ¼# Flocele, 10# Gilsonite, 3/10% Halad 9, 1/10% HR5 (1.96 yld). Tail w/900 sx 50/50 Standard Poz w/35 Gel, 9/10% Halad9, 2/10% CFR 3, 5# Gilsonite, ¼# Flocele (1.47 yld).

Alternate Two-stage cement job as follows:

First Stage: Cement to circulate to stage tool @ 5066'. Lead with 700 sx Class "G" 50/50 poz (13#, 1.47 yd) w/3% gel, 0.25 pps Celloflake, 5 pps Gilsonite, 0.25 pps Fluid loss, 0.15% dispersant, 0.1% retarder. WOC 4 hours prior to pumping second stage. (Slurry volume: 1029 cu. ft. Excess slurry: 50%). DV Tool at 5000 ft.

Second Stage: Cement to circulate to surface. Cement with 700 sx Class "G" (12#, 2.9yd) TXI Liteweight cement w/2.5% sodium metasilicate, 2% calcium chloride, 10 pps Gilsonite, 0.5 pps Celloflake, 0.2% antifoam. WOC a minimum of 18 hours prior to cleanout. (Slurry volume: 1914 cu. ft. Excess slurry: 50%). Tail w/50 sx Class "B" w/1/4# Flocele (15.6#, 1.18 yd) (Slurry 59 cu. ft., Excess 50%).

Float shoe on bottom. Three centralizers run every other joint above shoe. Thirty-five centralizers - one every 4^{th} joint to the base of the Ojo Alamo @ 2448'. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 2448'. Standard centralizers thereafter every fourth joint up to the base of the surface pipe.

Note: If open hole logs are run, cement volumes will be based on 25% excess over caliper volumes.

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Operations Plan – Canyon Largo Unit #487

Page Three

Additional Information:

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The Dakota formations will be completed.

- No abnormal temperatures or hazards are anticipated.
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The west half of the Section 15 is dedicated to this well.
- This gas is dedicated.
- Anticipated pore pressure

•	Fruitland Coal Pictured Cliffs	300 psi 500 psi	
	Mesa Verde	700 psi	
	Dakota	3000 psi	

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			HALLIBURTON		1 ****** * * • • ••** * *
	•	CEMEN Halliburte	T TEST REPORT		• • •
	•	Farmingto	n District Laboratory		•
	•	Farmir	ngton, NM 87499		· · ·
To:	Randy Snyder		Ċ	ompany:	
	Halliburton Energy S	Services	• M	ud Drilled	
Report: F	LMM4071		B	HST: 90 +/- deg F	
Dale:	6-Feb-04		B	HCT: 80 +/deg F	:
	All tests performe	d according to modifie	d API RP Spec 10,	1997	- ··· •
	Slurry: Surface	•			
Thickeni 2:50 to 7	n <mark>g Time:</mark> 0 BC	Free Water: 0.00%	<u>Settling;</u> 0.00%	<u>F</u>	luid Loss: 1158
Design			S	iurface Cement	
100%	Standard Cement			Density: 15.6 lb/gal	
2.00%	CaCI2	,	Z v	Vater: 5.24 gal/sk	•
.25 #/sk	Flocele				•
265	34		· · ·		• •
-		. •		·	
312	cutt	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		JCA @80 deg F (B)	HCT)- 3000 psi
Rheolog	י : - אנ		•	nsi	time
				50	1:55:00
deg ⊢ 600	80			500	4:30:00
300	42			1285	10:03:00
200	34		•	2580	24:00:00
100	25				
60 20	21]
50	10		•		•
3	10				
PV	26				- ·
YP	17		•		
				Bill Loughridge	
				Senior Scientist	
			•		

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INERU	AD TO EXTELLEN	CE STARTS WIT	SAFETY	
COMPANY COMPANY REP. CONTRACTOR	Huntington Er Ron Lackey Patterson # 741 Capyon Largo Unit	DATE CO. REP. TELE. # TOWN/STATE	/24/2005 793-7063 NM	
API NO. RAT MILEAGE	150	COUNTY	Rio Arriba	

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BURLINGTON RESOURCES OIL AND GAS COMPANY LP/HUNTINGTON ENERGY, LLC CANYON ARGO UNIT No. 487, 1445 FN 2105 FWL SECTION 15, T-2.-N, R-6-W, N.M.P.M., RIO ARRIBA COUNTY, NEW MEXICO DATE: AUGUST 30, 2005 GROUND ELEVATION: 6564, **5** A В 6 C (6) F 3.7 CONSTRUCTION ZONE C 0.5 C 1.7 INSTALL DRAIN PIPE ON FRUITLAND FORMATIONS ONLY 2.1 Slopes Reserve Pit ЯĞ 6' DEEP BLOW PIT 8' DEEP 10' DEEP 65, 8 8 20



NOTE:







IN REPLY REFER TO: 3162.3-1(07100)

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT Farmington Field Office 1235 La Plata Highway, Suite A Farmington, New Mexico 87401

> Huntington Energy, LLC #487 Canyon Largo Unit NMSF-078884 SE1/4NW1/4 Section 15, T. 25 N., R. 6 W. Rio Arriba County, New Mexico

Above Data Required on Well Sign

<u>GENERAL REQUIREMENTS</u> <u>FOR</u> OIL AND GAS OPERATIONS ON FEDERAL AND INDIAN LEASES

In addition to those requirements set forth in the laws, regulations and Onshore Orders, these requirements apply generally to all oil and gas operations on Federal and Indian leases. They apply specifically to the above described well. Special requirements that apply and are effective for this well, if any, are check-marked in Section VII of these General Requirements. The failure of the operator to comply with these requirements and the filing of required reports will result in strict enforcement of 43 CFR 3163.1 or 3163.2.

I. <u>GENERAL</u>

- A. Full compliance with all applicable laws, regulations, and Onshore Orders, with the approved Permit to Drill, and with the approved Surface Use and Operations Plan is required. Lessees and/or operators are fully accountable for the actions of their contractors and subcontractors.
- **B**. Each well shall have a well sign in legible condition from spud date to final abandonment. The sign should show the operator's name, lease serial number, or unit name, well number, location of the well, and whether lease is Tribal or Allotted, (See 43 CFR 3162.6(b)).
- C. A complete copy of the approved Application for Permit to Drill, along with any conditions of approval, shall be available to authorized personnel at the drill site whenever active drilling operations are under way.
- D. For Wildcat wells only, a drilling operations progress report is to be submitted, to the BLM-Field Office, weekly from the spud date until the well is completed and the Well Completion Report (Form 3160-4) is filed. The report should be on 82 x 11 inch paper, and each page should identify the well by; operator's name, well number, location and lease number.
- E. As soon as practical, notice is required of all blowouts, fires and accidents involving life-threatening injuries or loss of life. (See NTL-3A).

F. Prior approval by the BLM-Authorized Office (Drilling and Production Section) is required for variance from the approved drilling program and before commencing plugging operations, plug back work casing repair work, corrective cementing operations, or suspending drilling operations indefinitely. Emergency approval may be obtained orally, but such approval is contingent upon filing of a notice of intent (on a Sundry Notice, Form 3160-5) within three business days (original and three copies of Federal leases and an original and four copies on Indian leases). Any changes to the approved plan or any questions regarding drilling operations should be directed to BLM during regular business hours at 505-899-8900. Emergency program changes after hours should be directed to Adrienne Garcia at 505-326-1248 or Jim Lovato at 505-334-1266.

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- G. The Field Office Manager (Inspection and Enforcement Section, phone number (505-599-8907) is to be notified at least 24 hours in advance of any spudding, cementing, or plugging operations so that a BLM representative may witness the operations.
- H. Unless drilling operations are commenced within one year, approval of the Application for Permit to Drill well expire. A written request for a six months extension may be granted if submitted prior to expiration.
- I. From the time drilling operations are initiated and until drilling operations are completed, a member of the drilling crew or the tool pusher shall maintain rig surveillance at all time, unless the well is secured with blowout preventers or cement plugs.
- J. If for any reason, drilling operations are suspended for more than 90 days, a written notice must be provided to this office outlining your plans for this well.

II. <u>REPORTING REQUIREMENTS</u>

- A. For reporting purposes, all leases, communitization agreements or unit agreements are to be referenced by the numbers and prefixes affixed to the respective contract documents by the issuing agency at the time of issue.
- B. The following reports shall be filed with the BLM-Authorized Officer within 30 days after the work is completed.

- 1. Original and three copies on Federal and Original and four copies on Indian leases of Sundry Notice (Form 3160-5), giving complete information concerning.
 - a. Setting of each string of casing. Show size and depth of hole, grade and weight of casing, depth set, depth of any and all cementing tools that are used, amount (in cubic feet) and types of cement used, whether cement circulated to surface and all cement tops in the casing annulus, casing test method and results, and the date work was done. Show spud date on first report submitted.
 - b. Intervals tested, perforated (include; size, number and location of perforations), acidized, or fractured; and results obtained. Show date work was done (a Sundry Notice is not required if a Completion Report is submitted within 30 days of the operation).

- c. Subsequent Report of Abandonment, showing the manner in which the well was plugged, including depths where casing was cut and pulled, intervals (by depths) where cement plugs were replaced, and dates of the operations.
- 2. Well Completion Report (Form 3160-4) will be submitted with 30 days after well has been completed.
 - a. Initial Bottom Hole Pressure (BHP) for the producing formations. Show the BHP on the completion report. The pressure may be: 1) measured with a bottom hole bomb, or; 2) calculated based on shut in surface pressures (minimum seven day buildup) and fluid level shot.
- 3. Submit a cement evaluation log, if cement is not circulated to surface.
- 7

III. DRILLER'S LOG

The following shall be entered in the daily driller's log: 1) Blowout preventer pressures tests, including test pressures and results. 2) Blowout preventer tests for proper functioning, 3) Blowout prevention drills conducted, 4) Casing run, including size, grade, weight, and depth set, 5) How pipe was cemented, including amount of cement, type, whether cement circulated to surface, location of cementing tools, etc., 6) Waiting on cement time for each casing string, 7) Casing pressure tests after cementing, including test pressure and results and 8) Estimated amounts of oil and gas recovered and/or produced during drill stem test.

IV. GAS FLARING

Gas produced from this well may not be vented or flared beyond an initial, authorized test period of $\underline{*}$ Days or 50 MMCF following its (completion)(recompletion), whichever first occurs, without the prior, written approval of the authorized officer. Should gas be vented or flared without approval beyond the test period authorized above, you may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted, and you shall be required to compensate the lessor for the portion of the gas vented or flared without approval which is determined to have been subject to be approved by the less.

determined to have been avoidably lost.

*30 days, unless a longer test period specifically is approved by the authorized officer. The 30-day period beings when the casing is first perforated for cased holes, and when Total Depth (TD) is reached for open hold completion.

V. SAFETY

- A. All rig heating stoves are to be of the explosion-proof type.
- B. Rig safety lines are to be installed.
- C. Hard hats must be utilized.

VI. CHANGE OF PLANS OR ABANDONMENT

- A. Any changes of plans required in order to mitigate unanticipated conditions encountered during drilling operations, will require approval as set forth in Section 1.F.
- B. If the well is dry it is to be plugged in accord with 43 CFR 3162.3-4, approval of the proposed plugging program is required as set forth in Section 1.F. The report should show the total depth reached, the reason for plugging, and the proposed intervals, by depths, where cement plugs are to be placed, type of plugging mud, etc. A Subsequent Report of Abandonment is required as set forth in Section 11.B.1c.
- C. Unless a well has been properly cased and cemented, or properly plugged, the drilling rig must not be moved from the drill site without prior approval from the BLM-Authorized Officer.

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VII. SPECIAL STIPLATIONS

The following special requirements apply and are effective when checked:

- A. Communitization Agreement covering the acreage dedicated to the well must be filed for approval with the Bureau of Land Management, Farmington Field Office, Branch of Reservoir Management, 1235 La Plata Highway, Suite A, Farmington, New Mexico 87401. The effective date of the agreement must be Prior to any sales.
- B. The BLM-Authorized Officer requires testing all components of well control systems at the pressure requirements set forth in Onshore Oil and Gas Order No. 2, Section III. A. 1., plus a 30% safety factor, and does not elect to utilize the discretionary authority for requiring the testing of selected components at the A. P. L. working pressures.
- C. 🛛 Note Attachments
- D. The required wait on cement (WOC) time will be a minimum of 250 psi compressive strength at 60 degrees. Blowout preventor (BOP) nipple-up operations may then be initiated.

1.

VIII. PHONE NUMBERS

- A. For BOPE tests, cementing, and plugging operations the phone number is 505-599-8907 and should be called 24 hours in advance in order that a BLM representative may witness the operations.
- B. Emergency program changes after hours contact:

Adrienne Brumley (505) 326-1248 Or Jim Lovato at (505) 334-1266



Conditions of Approval

Operator:	Huntington Energy	Well Name:
Legal Location:	1,445' FNL, 2,105' FWL	CX Log Number:
	Sec. 15, T. 25 N., R. 6 W.	
Inspection Date:	12/08/05	Lease Number:

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Canyon Largo Unit #487 NM-210-06-259

NMSF 078884

The following conditions of approval stipulations apply to the Canyon Largo Unit #487 well, pipeline and other associated equipment and construction. Failure of the operator to comply may result in the assessment of liquidated damages or penalties pursuant to 43 CFR 3163.1 or 3163.2. A copy of these conditions of approval shall be present on the location during construction, drilling and reclamation activities.

The following conditions of approval will apply to this well unless a particular Surface Managing Agency or private surface owner has supplied to Bureau of Land Management and the operator a contradictory environmental stipulation. The failure of the operator to comply with these requirements may result in the assessment of liquidated damages or penalties pursuant to 43 CFR 3163.1 or 3163.2. A copy of these conditions of approval shall be present on the location during construction, drilling and reclamation activity.

Special Stipulations

This permit is contingent on compliance with the New Mexico Environmental Department, Air Quality Bureau's directive that compressor engines 300 horsepower or less have NOx emissions limited to 2 grams per horsepower hour.

Culverts of sufficient size (18" minimum) will be placed at the take off of the new 200' access and well pad entrance and as needed along the upgraded portion of the 1000' two (2) track.

All open top permanent production or storage tanks regardless of diameter made of fiberglass, steel, or other material used for the containment of oil, condensate, produced water and or other production waste shall be screened, netted or otherwise covered to protect migratory birds and other wildlife from access.

Production equipment [including any facilities associated with pipeline construction] shall be placed on location as not to interfere with reclaiming the cut and fill slopes to their proper ratio. If equipment is found to interfere with the proper reclamation of the slope, the company will be required to move the equipment so proper re-contouring can occur.

The existing access road will be upgraded to BLM standards. Construction techniques such as surfacing with sandstone, crowning, waterbar turnouts, culverts and water bar ditches will be utilized where appropriate and necessary.

The diversion ditch will be constructed above the cut slope on the east side draining to the south and away from the well pad.

Seed all the disturbed areas outside the anchors using designated seed mixture and to the specifications given. Disturbed areas shall be re-contoured and re-seeded within 120 days of final construction.

Туре	Variety or Cultivator	PLS/A
Western wheatgrass	Arriba	2.0
Indian ricegrass	Paloma	1.0
Blue grama	Hatcheta or Alma	0.25
Antelope bitterbrush	Unknown	0.10
Four-wing saltbrush	Unknown	0.25
Pubescent wheatgrass	Luna	2.0
Intermediate wheatgrass	Oahe	2.0
Small burnet	Delar	1.0

Hi-crest crested wheat grass can be substituted for Pubescent and Intermediate wheat grass and planted at 3.0 lbs PLS/A.

The operator or his contractor will contact the Bureau of Land Management, Farmington Field Office, Environmental Protection Staff, (505) 599-8900, 48 hours prior to any reclamation efforts associated with this project.

The final cut slope shall not be steeper than a 3:1 Ratio or as near the original contour as possible. The final fill slope shall not be steeper than a 3:1 or as near the original contour as possible. To obtain this ratio, pits and slopes shall be back-sloped into the pad upon completion of drilling. Construction slopes can be much steeper during drilling, but will be re-contoured to the above ratio during reclamation.

Pits will be lined with an impervious material at least 12 mils thick. Prior to closing the pit, the liner will be cut off at mud level. The excess liner will be hauled to a licensed disposal area.

Reserve pits will be closed and rehabilitated 90 days after completion or 120 days from the well spud date. All reserve pits remaining open after the 90 days will need written authorization of the Authorized Officer from the Farmington Field Office. This requirement is addressed in the General Requirements in Onshore Order #7.

The top 6 inches of soil material will be stripped and stockpiled in the construction zones of the well pad. The stockpiled soil material will be spread on the reclaimed portions of the pad [including the reserve pit, cut and fill slopes] prior to re-seeding. Spreading shall not be done when the ground or topsoil is frozen or wet.

If, in operations the operator/holder discovers any Threatened, Endangered or Sensitive species, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to the BLM T&E specialist @ (505) 599-8900. BLM will then specify what action is to be taken. Failure to notify the BLM about a discovery may result in civil or criminal penalties in accordance with the Endangered Species Act (as amended).

Inventory the proposed route or site for the presence of noxious weeds. Noxious weeds are those listed on the New Mexico Noxious Weed List. The following noxious weeds have been identified as occurring on lands within the boundaries of the Farmington Field Office (FFO).

Knapweed (Centaurea repens) Musk Thistle (Carduus nutans) Bull Thistle (Cirsium vulgare)Canada Thistle (Cirsium arvense) Scotch Thistle (Onopordum acanthium) Hoary Cress (Cardaria draba)Perennial Pepperweed (Lepidium latifolfium) Halogeton (Halogeton glomeratus) Russian Spotted Knapweed (Centaurea maculosa)Dalmation Toadflax (Linaria genistifolia) Yellow Toadflax (Linaria vulgaris)Camelthorn (Alhagi pseudalhagi) African Rue (Peganum harmala)Saltcedar (Tamarix spp.) Diffuse Knapweed (Centaurea diffusa) Leafy Spurge (Euphorbia esula)

Construction equipment should be inspected and cleaned prior to coming onto the work site. This is espécially important on vehicles from out of state or if coming from a weed infested area.

If fill dirt or gravel will be required, the source shall to be noxious weed free.

The site shall be monitored for the life of the project for the presence of noxious weeds (includes maintenance and construction activities). If weeds are found, the FFO Weed Coordinator will be notified at (505) 599-8900 and the coordinator will determine the best method for the control of the particular weed species. Treat existing weeds prior to new surface disturbance.

Compressor units on this well location not equipped with a drip pan for containment of fluids shall be lined with an impervious material at least 8 mils thick and a 12 inch berm. The compressor will be painted to match the well facilities. Any variance to this will be approved by the Authorized Officer (AO). When compressor units are washed, or any other equipment associated with the locations, the fluids (i.e., scrubber cleaners) will be properly disposed of to avoid ground contamination or hazard to livestock or wildlife.

All above ground structures shall be painted to blend with the natural color of the landscape. The paint used shall be: Federal 595a-34127 (Juniper Green)

Performing construction maintenance activities outside the original cultural survey will require approval and a new cultural survey and clearance.

The holder shall place slope stakes, culvert location and grade stakes, and other construction control stakes as deemed necessary by the authorized officer to ensure construction in accordance with the plan of development. If stakes are disturbed, they shall be replaced before proceeding with construction.

No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of 6 inches deep, the soil shall be deemed too wet.

When construction activity in connection with the right-of-way breaks or destroys a natural barrier used for livestock control, gaps thus opened shall be fenced to prevent drift of livestock. The subject natural barrier shall be identified and fenced by the holder as per instructions of the **Authorized Officer (AO)**.

Maintain a minimum of ten (10) feet of undisturbed surface between fence lines and roads that are constructed parallel to fences.

Each fence crossed by this right-of-way shall be braced and secured to prevent slacking of the wire, before cutting the wire. The opening thus created shall be temporarily closed as necessary during construction to prevent passage of livestock. Upon completion of construction, install a cattle guard with an adjacent sixteen (16) foot gate. The cattle guard shall be constructed to Bureau of Land Management specifications.

A professional engineer shall design those segments of road where the grade is in excess of ten percent for more than 300 feet.

Right-of-way clearing shall be limited to 15 feet on each side of centerline.

This road shall have a maximum driving surface of 16 feet, and a maximum bladed width of 30 feet excluding turnout ditches and turnouts, and a maximum grade of 10 percent (pitches over 10 percent that are less than 300 feet in length may be allowed).

Crowning and ditching on both sides of the road is required. The road cross section will conform to the cross section diagrams available from Bureau of Land Management. The crown shall have a grade of approximately two percent (I.e., two inch crown on a 16 foot wide road).

Drainage control shall be ensured over the entire road through the use of borrow ditches, drainage dips, out-sloping, in-sloping, natural rolling topography, and/or turnout (lead-off) ditches. Every drainage dip shall drain water into an adjacent turnout ditch.

The holder shall construct low-water crossings in a manner that will prevent any blockage or restriction of the existing channel. Material removed shall be stockpiled for use in rehabilitation of the crossing.

Surfacing may be applied at the Holder's discretion, but is not required at this time. However, if it becomes evident there is resource damage or it becomes evident the road is receiving excess damage, surfacing will be required.

The Holder shall furnish and apply water, chemicals, or use other means satisfactory to the Authorized Officer for dust.

Pipeline Stipulations

No surface disturbing activities shall take place on the subject right-of-way until the associated APD is approved. The holder will adhere to special stipulations in the Surface Use Program of the approved APD, relevant to any right-of-way facilities.

The holder shall mark the exterior boundaries of the right-of-way with stake and/or lath at 100 to

200 foot intervals. The intervals may be varied at the time of staking at the discretion of the **AO**. The tops of the stakes and/or laths will be painted and the laths flagged in a distinctive color as determined by the holder. The survey station numbers will be marked on the boundary stakes and/or laths at the entrance to and the exit from public land. The holder shall maintain all boundary stakes and/or laths in place until final cleanup and restoration is completed and approved by the **AO**. The stakes and/or laths will then be removed at the direction of the **AO**.

No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of 6 inches deep, the soil shall be deemed too wet.

When construction activity in connection with the right-of-way breaks or destroys a natural barrier used for livestock control, gaps thus opened shall be fenced to prevent drift of livestock. The subject natural barrier shall be identified and fenced by the holder as per instructions of the **AO**.

Maintain a minimum of ten (10) feet of undisturbed surface between fence lines and roads that are constructed parallel to fences.

Each fence crossed by this right-of-way shall be braced and secured to prevent slacking of the wire, before cutting the wire. The opening thus created shall be temporarily closed as necessary during construction to prevent passage of livestock. Upon completion of construction, reconstruct the fence to Bureau of Land Management specifications.

Right-of-way clearing shall be limited to the access road plus 20 feet.

Side-hill cuts of more than three (3) feet are not permitted. Areas requiring cuts greater than this shall be terraced so none are greater than three (3) feet.

Bury the pipeline in the existing well pad or twenty (20) feet from the edge of the traveled surface of the existing road.

The Holder shall re-contour disturbed areas, and obliterate all earthwork by removing embankments, backfilling excavations, and grading to re-establish the approximate original contours of the land in the right-of-way.

Construct earthen berms that are a minimum of four (4) feet high with a ditch that has a one (1) foot vertical face away from the right-of-way, i.e., towards the direction of potential traffic, cut at the base of the berm. Construct this type berm at each end of the right-of-way where it is separate from the road.

All above ground structures not subject to safety requirements shall be painted by the Holder to blend with the natural color of the landscape. A reflective material may be used to reduce hazards that may occur when such structures are near roads. Otherwise, the paint use shall be a non-glare, non-freflective, non-chalking color of Federal Juniper Green (595a-34127).

Seed all the disturbed areas (except the driving surface and road shoulders [entire area if road is to be reclaimed] road only) using designated seed mixture and to the specifications given. Disturbed areas shall be re-seeded within 120 days of final construction.

Location, Access Road and Pipeline

Well area and lease premises will be maintained in a workmanlike manner with due regard to safety, conservation and appearance. All liquid waste, completion fluids and drilling products associated with oil and gas operations will be contained and then buried in place, or removed and deposited in an approved disposal site.

Surface disturbance and vehicular traffic will be limited to the approved location and approved access road.

Mud and blow pits will be constructed so as not to leak, break or allow discharge of liquids or produced solids. At least half of the capacity of the reserve pit must be in cut. The top of the outside wall of reserve pit should be smoothed-off with a minimum of one blade width. The pit should have adequate capacity to maintain 2 feet of free board. Pits are not to be located in natural

drainages. Pit walls are to be "walked down" by a crawler type tractor following construction and prior to usage. Any plastic material used to line pits must be removed to below-ground level before pits are covered. The final grade of reserve pit (after reclamation) shall allow for drainage away from pit area.

All unguarded pits (reserve/production/blow pits) containing liquids will be fenced with woven wire. Drilling pits will be fenced on three sides and once the rig leaves location, the fourth side will be fenced. All fencing must be a legal fence in accordance with New Mexico State Law. Liquids in pits will be allowed to evaporate, or be properly disposed of, before pits are filled and re-contoured. (This office will be notified 24 hours prior to fluid hauling). Under no circumstances will pits be cut and drained. Aeration of pit fluids must be confined within pit area. Upon completion of the well the reserve pit will be covered with screening or netting and remained covered until the pit is reclaimed. All production pits 16 feet in diameter or larger will be covered with screening or netting.

No gravel or other related minerals from new or existing pits on federal land will be used in construction of roads, well sites, etc., without prior approval from the Surface Managing Agency.

Berms or firewalls will be constructed around all storage facilities sufficient in size to contain the storage capacity of tanks, or the combined capacity of tanks if a rupture could drain more than one tank. Berm walls will be compacted with appropriate equipment to assure proper construction.

All roads on public land must be maintained in good passable condition year round.

The holder shall conduct all activities associated with the construction, operation, and termination of the right-of-way within the authorized limits of the right-of-way.

A copy of these stipulations, including exhibits and the Plan(s) of Operation (if required), shall be at the project area and available to persons directing equipment operation.

Disposal of all liquid and solid waste produced during operation of this right-of-way shall be in an approved manner so it will not impact the air, soil, water, vegetation or animals.

The holder shall not violate applicable air and water quality standards or related facility siting standards established by or pursuant to applicable Federal and State law.

Use of pesticides and herbicides shall comply with applicable federal/state laws. Pesticides and herbicides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, holder shall obtain from the **AO** written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary. Emergency use of pesticides shall be approved in writing by the **AO** prior to use.

The-holder shall be responsible for weed control and selective control of invasive weeds on disturbed and reclaimed areas within the limits of the well pad, associated road and pipeline ROW. The holder is responsible for consultation with the **AO** and/or local authorities for acceptable weed control methods within limits imposed in the conditions of approval.

The holder shall minimize disturbance to existing fences and other improvements on public land. Holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be H-braced on both sides of the passageway prior to cutting the fence.

Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes and equipment.

The holder shall maintain the ROW in a safe, useable condition, as directed by the **AO**. (A regular maintenance program shall include, but is not limited to, soil stabilization.)

Unless otherwise approved in writing by the AO, this road will be designed and constructed to

conform with the Bureau of Land Management, New Mexico road construction/maintenance policy.

Public access along this road will not be restricted by the holder without specific written approval being granted by the **AO**. Gates or cattle-guards on the public land will not be locked or closed to public use unless specifically determined by the **AO**.

Unless otherwise approved in writing by the **AO**, drainage dip location for grades over two (2) percent shall be determined by the formula:

Spacing Interval = <u>400 + 100' =</u> road slope %

Example: For a road with a four (4) percent slope. Spacing Interval $\frac{400 + 100'}{4\%} = 200$ feet

Unless otherwise approved in writing by the **AO**, all turnout ditches shall be graded to drain water with a one (1) percent minimum to three (3) percent maximum ditch slope. The spacing interval for turnout ditches shall be determined according to the following table, but may be amended depending upon existing soil types and centerline road grade:

SPACING INTERVAL FOR TURNOUT DITCHES

Percent Slope	Spacing Interval
0 - 4%	150 - 350 feet
4 - 6%	125 - 250 feet
6 - 8%	100 - 200 feet
8 - 10%	75 - 150 feet

Maintain the road so that user traffic remains within right-of-way and erosion is mitigated. Roads and road segments where serious erosional damage is occurring will be handled on a case-by-case basis. "Flat blading" will be avoided. An exemption would be permitted where bedrock is exposed at the surface. Roads will be maintained so that over time a proper road prism and good drainage is achieved. Maintenance will include drainage dips, turnout ditches, crowning and/or out-sloping/insloping, low water crossings and vehicle turnouts. Cattle guards and culverts will be cleaned and repaired or replaced. Surfacing may be required.

Failure of the holder to share maintenance costs in dollars, equipment, materials or man-power proportionate to the holder's use with other authorized users may be adequate grounds to terminate right-of-way grant. The determination as to whether this has occurred and the decision to terminate shall rest with the **AO**. Upon request, the **AO** shall be provided with copies of any maintenance agreement entered into.

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Cultural Resources

Discovery of Cultural Resources in the Absence of Monitoring:

If, in its operations, operator/holder discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to Bureau of Land Management Field Manager. The Bureau of Land Management will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the Bureau Land Management will evaluate the significance of discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization, or data recovery may be performed by a Bureau of Land Management or permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is completed. Failure to notify the Bureau of Land Management about a discovery may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 (as amended).

Discovery of Cultural Resources during Monitoring:

If monitoring confirms the presence of previously unidentified cultural resources, then work in the vicinity of the discovery will be suspended and the monitor will promptly report the discovery to the Bureau of Land Management Field Manager. The Bureau of Land Management will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the Bureau of Land Management will evaluate the significance of the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. A Bureau of Land Management or permitted cultural resources consultant may perform minor recordation, stabilization, or data recovery. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is completed.

Damage to Sites:

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If, in its operations, operator/holder damages, or is found to have damaged any previously documented or undocumented historic or prehistoric cultural resources, excluding "discoveries" as noted above, the operator/holder agrees at his/her expense to have a permitted cultural resources consultant prepare and have executed a Bureau of Land Management approved data recovery plan. Damage to cultural resources may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 (as amended).

Seeding

Seed all the disturbed areas outside the anchors using designated seed mixture and to the specifications given. Disturbed areas shall be re-contoured and re-seeded within 120 days of final construction.

Туре	Variety or Cultivator	PLS/A
Western wheatgrass	Arriba	2.0
Indian ricegrass	Paloma	1.0
Blue grama	Hatcheta or Alma	0.25
Antelope bitterbrush	Unknown	0.10
Four-wing saltbrush	Unknown	0.25
Pubescent wheatgrass	Luna	2.0
Intermediate wheatgrass	Oahe	2.0
Small burnet	Delar	1.0

Hi-crest crested wheat grass can be substituted for Pubescent and Intermediate wheat grass and planted at 3.0 lbs PLS/A.

	Species shall be planted in pounds of pure live seed per acre:
£.	Present Pure Live Seed (PLS) = Purity X Germination/100
	Two lots of seed can be compared on the basis of PLS as follows:

Source No. One (poor quality) Source No		Source No. two	b. two (better quality)	
Purity	50 percent	Purity	80 percent	
Germination	40 percent	Germination	63 percent	
Percent PLS	20 percent	Percent PLS	50 percent	
5 lb. bulk seed r	equired to make	2 lb. bulk seed r	equired to make	
1 lb. PLS		1 lb. PLS	-	

Seed mixture used must be certified. There shall be **NO** primary or secondary noxious weeds in seed mixture. Seed labels from each bag shall be available for inspection while seed is being sown.

Seeding shall be accomplished within 120 days of completion of the construction project (timeframe may be extended on a case-by-case basis with AO approval). Seeding shall be repeated if a satisfactory stand is not obtained as determined by the **AO** upon evaluation after the second growing season.

Compacted areas shall be ripped to a depth of twelve (12) inches and disked to a depth of six (6) inches before seeding. Seeding shall be done using a disk-type drill with two boxes for various seed

sizes. The drill rows shall be eight to ten inches apart. Seed shall be planted at not less than onehalf inch deep or more than one inch deep. The seeder shall be followed with a drag, packer, or roller to ensure uniform coverage of the seed, and adequate compaction. Drilling shall be done on the contour where possible, not up and down the slope.

Where slopes are too steep for contour drilling a "cyclone" hand seeder or similar broadcast seeder shall be used. Seed shall then be covered to the depth described above by whatever means is practical, i.e. hand raked. If the seed is not covered, the prescribed seed mixture amount (pounds/acre/PLS) will be doubled.

If, upon abandonment of wells, the retention of access road is not considered necessary for the management and multiple-use of the natural resources, it will be ripped a minimum of 12" in depth. After ripping, water bars will be installed. All ripped surfaces are to be protected from vehicular travel by construction of a dead end ditch and earthen barricade at the entrance to these ripped areas. (Re-seeding of affected areas may be required.)

Abandonment

Ninety days prior to termination of the ROW, the holder shall contact the **AO** to arrange a joint inspection of the ROW. This inspection will be held to agree to an acceptable termination (and rehabilitation) plan. This plan shall include, but is not limited to, removal of facilities, drainage structures, or surfacing material, re-contouring, top soiling or seeding. The **AO** must approve the plan in writing prior to the holder's commencement of any termination actions.

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LLL OPARTMENT OF THE ANTENCOR BARRAN OF LAND MANAGAMENT			BLM USG Activ	<u>I Report Number:</u> 2 <u>S Map:</u> Gonzales M <u>rity Code</u> : 1310	2006(II)049F Mesa
<u>C</u>	ULTURAL RESOUR	<u>CE RECORD C</u>	F REVIE	W	
	BUREAU OF LAI	ND MANAGEM	ENT		
1. Description of Report Project Name: Canyon Project Sponsor: Huntin Arch. Firm & Report No.	rt/Project: Largo Unite #487, Accongton Energy 0.: Division of Conserv	ess, and Pipeline	y 05-DC.	A-214	
Location: T25N, R6W,	Sec. 15 <u>Well Footages:</u>	1445 FNL 21	5 FWL		
<u>Sites Located:</u> No⊠ Y One isolated artifact onl <u>Determination:</u> No Cult No Adv	1554 x 50' - pipeline ar [es] y. tural Resources] N verse Effect] A	nd access o Historic Prope dverse Effect	rties 🛛 1]	No Effect	
2. Field Check: No [Comment/Resul	X Yes 🗌 Date: n/a ts: n/a				
3. Cultural ACEC: N	Jo 🛛 Yes 🗌:				
4. Traditional Cultura	al Property: No 🛛	Yes 🗌:			
5. Recommendation:	PROCEED WITH ACI	TION 🛛 S	TIPULATI	ONS ATTACHED	
6. Reviewer /Archaeol	ogist: James M. Copela	and Date: Janu	ary 23, 200	06	

Report Summary	BLM	Other	Total
Acres Inventoried	11.86	0	11.86
Sites Recorded	0	0	0
Prev. Recorded Sites	0	0	0
Sites Avoided	0	0	0
Sites Treated	0	0	0

Discovery of Cultural Resources in the Presence or Absence of Monitoring: If, in its operations, Project sponsor discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to the BLM Field Manager.

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Note: If there are questions about these stipulations, contact Jim Copeland (BLM) at 505-599-6335 or jim_copeland@nm.blm.gov

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Huntington Energy, L.L.C. Canyon Largo Unit #487 Multi-Point Surface Use Plan

- 1. Existing Roads Refer to Map No. 1. Existing roads used to access the proposed Location will be properly maintained for the duration of the project. Bureau of Land Management right-of-way has been applied for as shown on Map No. 1.
- 2. Planned access Road Refer to Map No. 1. No new access road will be needed.
- 3. Location of Existing Wells Refer to Map No. 1.

- 4. Location of Existing and/or Proposed Facilities if Well is Productive
 - a. On the Well Pad Refer to Plat No. 1, anticipated production facilities plat.
 - b. Off the Well Pad Anticipated pipeline facilities as shown on the attached plat from El Paso Field Services.
- Location and Type of Water Supply Water will be hauled by truck for the proposed project and will be obtained from Gonzales Mesa Water Well #1 located SE Section 3, T-25N, R-6-W, New Mexico.
- 6. Source of Construction Materials If construction materials are required for the proposed project, such materials will be obtained from a commercial guarry.
- 7. Methods of Handling Waste Materials All garbage and trash materials will be removed from the site for proper disposal. A portable toilet will be provided for human waste and serviced in a proper manner. Waste minimization techniques will be used to reduce drilling waste volumes. If liquids are left in the reserve pit after completion of the project, the pit will be fenced until the liquids have had adequate time to dry. The location clean-up will not take place until such time as the reserve pit can be properly covered over to prevent run-off from carrying waste materials into the watershed. Reserve pits will be lined as needed with either 12 mil bio-degradable plastic liner or a Bentonite liner. All earthen pits will be so constructed as to prevent leakage from occurring; no earthen pit will be located on natural drainage. Generation of hazardous waste is not anticipated. Federal regulations will be adhered to regarding handling and disposal of such waste if so generated.
- 8. Ancillary Facilities None anticipated.
- 9. Wellsite Layout Refer to the location diagram and to the wellsite cut and fill diagram (Figure No. 4). The blow pit will be constructed with a 2'/160' grade to allow positive drainage to the reserve pit and prevent standing liquids in the blow pit.
- 10. Plans for Restoration of the Surface After completion of the proposed project, the location will be cleaned and leveled. The location will be left in such a condition that will enable reseeding operations to be carried out. Seed mixture as designated by the responsible government agency will be used. The reseeding operations will be performed during the time period set forth by the responsible government agency. The permanent location facilities will be painted as designated by the responsible government agency.

11. Surface Ownership – Bureau of Land Management

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- 12. Other Information Environmental stipulations as outlined by the responsible government agency will be adhered to. Refer to the archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.
- 13. General Manager Compliance Huntington Energy, L.L.C., 6301 Waterford Boulevard, Suite 400, Oklahoma City, OK 73118, telephone (405) 840-9876. I hereby certify that I or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan, are to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Huntington Energy, L.L.C. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.
- 3 14. Build Division ditches above cut slope between corners #3 and #5 draining east.
- 15. Build Division ditches above cut slope between corners #2 and #3 draining south.

egulatory Supervisor

<u>12/1/05</u> Date





