			OCD Artesia		OMB No. 1004-0137 Expires October 31, 2014
	UNIT DEPARTMEN	TED STATES	Tes Ormente Ormente Ormente	3-14	5. Lease Serial No. NMNM120894 (SWSE).NMNM118714
н К	APPLICATION FOR P			- '/	6. If Indian, Allotee or Tribe Name SICHIE
la. Type of work:	DRILL	REENTER		• • <u>;</u> ;	7 If Unit or CA Agreement, Name and No.
lb. Type of Well:	Oil Welt Gas Well	Other	Single Zone 🔲 Multi	ple Zone	8. Lease Name and Well No. < 31375 Rustler Bluff 34 24 29 Fed Com #2H
2. Name of Operat	tor CHEVRON U.S.A. INC.	,	<i>&lt;</i> 4323	2>	9. API Well No.
3a. Address 15 S MIDI	MITH ROAD LAND, TEXAS 79705	3	b. Phone No. (include area code) 432-687-7375		PIERCE CROSSING BONE OPAINOT
4. Location of We	11 (Report location clearly and in	accordance with any	State requirements.*)		11. Sec., TR. M. or Blk. and Survey or Area
At surface 270	6' FNL & 2205' FEL od zóne 33n' FNL & 2205''F	FI			SEC 3, T-25S, R29E, UL:B (SHL) / / / SEC 34, T24S, R29E, UL: B (BHL) / / /
14. Distance in miles 1.3 MILES FRO	s and direction from nearest town MALAGA, NEW MEXICO	or post office*		· · · · ·	12. County or Parish 13. State
<ol> <li>Distance from pr location to heare property or lease (Also to nearest</li> </ol>	roposed <sup>*</sup> 276' FNL OF SEC 3 st : line, ft. drig. unit line, if any)	3	16. No. of acres in lease 640	17. Spaci 160	ng Unit dedicated to this well
<ol> <li>Distance from pr to nearest well, d applied for, on th</li> </ol>	oposed location. <sup>*</sup> 3442' TO E trilling, completed, NEW YEAF his lease, ft	OG <sup>†</sup> R FED #1	19. Proposed Depth :	20. BLM CA0329	/BIA Bond No. on file 9
21. Elevations (Sho	ow whether DF, KDB, RT, GL, e	etc.)	22. Approximate date work will sta	irt*	23. Estimated duration
2979' GL	leted in accordance with the requi	irements of Onshore	24. Attachments Oil and Gas Order No.1, must be	attached to th	his form:
2979' GL The following, compl 1. Well plat certified 2. A Drilling Plan. 3. A Surface Use P SUPO must be fi 25. Signature $\sqrt{V}$	leted in accordance with the requi I by a registered surveyor. Ilan (if the location is on Nation led with the appropriate Forest Se	al Forest System L	24. Attachments Oil and Gas Order No.1, must be a ands, the Name ( <i>Printed Typed</i> )	attached to the operation cation specific int	his form: ons unless covered by an existing bond on file (see formation and/or plans as may be required by the
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District 1 1625. N. French Dr.a Phöne: (575) 393-5 Still S. Frieş St., Art Phane: (575) 745-1; District III 1990 Rio Drazios Re Phone: (505) 334-6 District IV 1;226 S. Sc Francis J	i Hobbs, NM 8 151 Fait: (575) esia, NM 83211 233 Fax: (575) paid, Aktec, NM 175 Fax: (505) Q1, Santa Feyt	3240 \$93-0720 745-9720 37410 134-6170 (51 37505 176-345)	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Françis Dr. Santa Fe, NM 87505						Form C-102 ed August 1, 2011 opy to appropriate District Office ENDED REPORT
<u>30-0</u> 312	Plone (205) 476-3403 WELL LOCATION AND ACREAGE DEDICATION PLAT API Number 26/11 Property Name SUSTLER BLUEF 34 24 29 FED.COM								
'ÜĞRI	ID NO.	3		io Chevr	perator Name ON U.S.A. IN	Ċ			Elevation 2979
		····		10 Sur	face Locat	ion	· · · · · · · · · · · · · · · · · · ·	·····	<del>,</del>
UL or lot no. B	Section 3	Township 25 SOUTH	Range 29 EAST, N.M.P.M.	Lot Idn	Feet from the 276;	North/South line NORTH	Feet from the 2205'	Enst/West Jine EAST	County EDDY
			" Bottom H	Iole Locat	ion If Diffe	erent From S	urface		
UL or lot no.	Section	Township	Ränge	Lot Idn	Feet from the	North/South line	Feer from the	East/West line	County
В	34	24 SOUTH	H 29 EAST, N.M.P.M. 330' NORTH 2205'					EAST	EDDY
<sup>12</sup> Dedicated A	čřeš D'Joi	nt or Infill	<sup>14</sup> .Consolidation Code	Order No.	. <u>.</u>				·····

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.











Exhibit B

34-24-29 1 Mile Radii around Surface and Bottom Hole Locations for Chevron Rustler Bluff 34-24-29 FED 2H

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"Exhibit C"



DURING THE DRILLING OF THIS WELL, CHEVRON PROPOSES TO USE A CLOSED LOOP SYSTEM WITH A STEEL TANK AND HAUL TO THE REQUIRED DISPOSAL, PER THE OCD RULE 19.15.17.

PLEASE FIND THE FOLLOWING ATTACHMENTS:

C-102 (EXHIBIT A-1)

VICINITY MAPS (EXHIBIT A-2 through A3)

MILE RADIUS MAP (EXHIBIT B)

DRILLING PLAN

**DIRECTIONAL PLAN & PLOT** 

**BOP SCHEMATIC** 

CHOKE MANIFOLD SCHEMATIC

BOPE TESTING

RIG LAYOUT/FACILITY PAD (EXHIBIT D)

SURFACE USE PLAN

**OPERATOR CERTIFICATION – SIGNED** 

OIL & GAS MEASUREMENT SCHEMATIC (EXHIBIT C)

H2S PLAN

MISCELLANEOUS MAPS (PROPOSED PAD & ACCESS ROAD, EXISTING & PROPOSED ROW EASEMENT DETAIL, PROPOSED FLOWLINE

COFLEX HOSE TEST CERTIFICATION & CHART

WELLHEAD SCHEMATIC

PRESSURE CONTROL WELLHEAD EQPT RUNNING PROCEDURE

NOT REGULTED

ONSHORE ORDER NO. 1 Chevron Operating Inc. Rustler Bluff 34-24-29 Fed Com 2H Eddy, NM

#### 1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA	KBTVD	MD
Rustler	2773	-237	· · · · · · · · · · · · · · · · · · ·
Salado	2361	649	
Castile	1547	1463	1
Lamar	60	2950	
Bell Canyon	20	2990	
Cherry Canyon	-894	3904	
Brushy Canyon	-2236	5246	
Bone Spring Limestone	-3813	6823	
1st Bone Spring	-4704	7714	
2nd Bone Spring	-5579	8589	
Lateral TD (2nd Bone Spring).	(5,800)	8,810	13,838_

#### 2. ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING FORMATIONS

The estimated depths at which the top and bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation	Depth
Deepest Ex	pected Base of Fresh Water	350
Water	Rustler	237
Water	Bell Canyon	2990
Oil/Gas	Cherry Canyon	3904
Oil/Gas	Brushy Canyon	5246
Oil/Gas	Bone Spring Limestone	6823
Oil/Gas	1st Bone Spring	7714
Oil/Gas	2nd Bone Spring	8589

All shows of fresh water and minerals will be reported and protected.

#### 3. BOP EQUIPMENT

Will have a minimum of a 5000 psi rig stack (see proposed schematic) for drill out below surface casing. Stack will be tested as specified in the attached testing requirements. Chevron requests a variance to use A coflex hose with a <u>metal protective covering</u> that will be utilized between the BOP and Choke manifold. Please see the attached testing and certification information.

Chevron requests a variance to use a GE/Vetco SH-2 Multibowl wellhead, which will be run through the rig foor on surface casing. BOPE will be nippled up and test after cementing surface casing. Subsequent tests will be performed as needed, not to exceed 30 days. The field report from GE/Vetco and BOP test information will be provided in a subsequent report at the end of the well. Please see the attached wellhead schematic. An installation manual has been placed on file with the BLM office and remains unchanged from previous submittal.

#### 4. CASING PROGRAM

a. The proposed casing program will be as follows:

Purpose	From	То	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	400'	17-1/2"	13-3/8"	48 #	H-40	STC	New
Intermediate	0'	2,950'	12-1/4"	9-5/8"	40 #	HCK-55	LTC	New
Production	0'	13,838'	8-3/4"	5-1/2"	17.0 #	HCP-110	CDC	New

- b. Casing design subject to revision based on geologic conditions encountered.
- c. \*\*\*A "Worst Case" casing design for wells in a particular area is used below to calculate the Casing Safety Factors. If for any reason the casing design for a particular well requires setting casing deeper than the following "worst case" design, then the Casing Safety Factors will be recalcuated & sent to the BLM prior to drilling.
- d. Chevron will fill casing at a minimum of every 20 jts (840') while running for intermediate and production casing in order to maintain collapse SF.

#### SF Calculations based on the following "Worst Case" casing design.

Surface Casing:	1500'	:	
Intermediate Casing:	5300'		
Production Casing:	16,500' ME	D/11,500' TVD (5000' VS @	) 90 deg inc)
Casing String	Min SF Burst	Min SF Collapse	Min SF Tension
Surface	1.28	1.14	1.6
Shallow Intermediate	1.28	1.25	1.6
Production	1.34	1.65	1.6

Min SF is the smallest of a group of safety factors that include the following considerations:

	Surf	Int	Prod
Burst Design			
Pressure Test- Surface, Int, Prod Csg	X	X	X
P external: Water			
P internal: Test psi + next section heaviest mud in csg			
Displace to Gas- Surf Csg	X		
P external: Water			
P internal: Dry Gas from Next Csg Point			
Frac at Shoe, Gas to Surf- Int Csg		X	,
P external: Water			
P internal: Dry Gas, 15 ppg Frac Gradient			
Stimulation (Frac) Pressures- Prod Csg			X
P external: Water			
P internal: Max inj pressure w/ heaviest injected fluid			
Tubing leak- Prod Csg (packer at KOP)			X
P external: Water			
P internal: Leak just below surf, 8.7 ppg packer fluid			
Collapse Design	•		•
Full Evacuation	X	X	Х
P external: Water gradient in cement, mud above TOC			
P internal: none			
Cementing- Surf, Int, Prod Csg	X	X	X
P external: Wet cement			
P internal: water			
Tension Design			
100k lb overpull	X	X	X

5

ONSHORE ORDER NO. 1 Chevron Operating Inc. Rustler Bluff 34-24-29 Fed Com 2H Eddy, NM

#### 5. CEMENTING PROGRAM

Slurry	Туре	Тор	Bottom	Weight	Yield	%Excess	Sacks	Water
Surface				(ppg)	(sx/cu ft)	Open Hole		gal/sk
Lead	C + 4%, Gel+2% CaCl	· 0'	0' ·	13.5	1.75	125		9.18
Tail	Class C+2%CaCl	0'	400'	14.8	1.36	125	472	6.39
Intermediate								
Lead	65C/35Poz +6%Gel +5%Salt	0'	2,350'	13.7	1.68	100	817	9.72
Tail	Class C	2,350'	2,950'	14.8	1.33	100	311	6.24
Production								
1st Lead	50% Class H+ 50% Silícalite +2% Gel	2,450'	8,032'	11.3	2.54	100	1062	15.07
2nd Lood	Versacem	8,032'	12,810'	12.5	1.81	35	903	8.10
	(Halliburton)							
Tail	Acid Soluble Cement	12,810'	13,838'	15	2.6	0	100	11.2

1. Final cement volumes will be determined by caliper.

2. Surface casing shall have at least one centralizer installed on each of the bottom three joints starting with the shoe joint.

3. Production casing will have one horizontal type centralizer on every joint for the first 1000' from TD, then every other joint to EOB, and then every third joint to KOP. Bowspring type centralizers will be run from KOP to intermediate casing.

ONSHORE ORDER NO. 1 Chevron Operating Inc. Rustler Bluff 34-24-29 Fed Com 2H Eddy, NM

#### 6. MUD PROGRAM

From	То	Туре	Weight	F. Vis	Filtrate	
0'	400'	Spud Mud	8.3 - 8.7	32 - 34	NC - NC	
400'	2,950'	Brine	9,5 - 10.1	28 - 29	NC - NC	
2,950'	8,332'	FW/Cut Brine	. 8.3 - 9.5	28 - 29	NC - NC	
8,332'	9,082'	Cut Brine	8.3 - 9.5	28 - 30	15 - 25	Curve
9,082'	13,838'	FW/Cut Brine	8.3 - 9.5	28 - 29	15 - 25	

A closed system will by utilized consisting of above ground steel tanks. All wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in an approved sanitary landfill. Sanitary wastes will be contained in a chemical porta-toilet and then hauled to an approved sanitary landfill.

All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume. When abnormal pressures are anticipated -- a pit volume totalizer (PVT), stroke counter, and flow sensor will be used to detect volume changes indicating loss or gain of circulating fluid volume.

A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost circulation as hole conditions dictate.

#### 7. TESTING, LOGGING, AND CORING

The anticipated type and amount of testing, logging, and coring are as follows:

- a. Drill stem tests are not planned.
- b. The logging program will be as follows:

TYPE	Logs	Interval	Timing	Vendor
Mudlogs	2 man mudlog	Int Csg to TD	Drillout of Int Csg	TBD
LWD	MWD Gamma	Curve and Lateral	While Drilling	TBD
	-	-	-	-
-	-	-	-	-
-	]-	-	-	-

c. Conventional whole core samples are not planned.

d. A Directional Survey will be run.

#### 8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

- a. No abnormal pressures or temperatures are expected. Estimated BHP is: 3940 psi b. Hydrogen sulfide gas is not anticipated. An H2S Contingency plan is attached with this APD in the
- event that H2S is encountered

# Chevron USA, Inc.



# Chevron USA, Inc.



# Chevron USA, Inc.

Eddy County, NM Rustler Bluff 34 24 29 Fed Rustler Bluff 34 24 29 Fed No. 2H

Wellbore #1

Plan: Plan #1

# **Standard Planning Report**

26 March, 2014

## Planning Report

Database Company Project Site Well Wellbore Design	STXWP Chevron Eddy Col Rustler B Rustler B Wellbore IPlan #1	EDM: USA-Inc unty: NM Iuff 34-24-29 Iuff 34-24-29 #11	)Fed /Fed No.2h		Local Coto TVD Refere MD Refere North Refe	rdinate Refer ence: nce: rence culation Meth	ence: Wel GL 767 GL 767 GC Grid odł Mini	I'Rustler:Blu 2979:0' + KE ) 2979:0' + KE ) 1 mum:Curval	ff 34 24 29 1 125.0 (@ 30 3 25.0 (@ 30 3 25.0 (@ 30	Fed'No: 2H 104:00usft (Ensign 104:00usft (Ensign)
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## Planning Report

Database: Company-	STXWP_EDM Chevron/USA	linc:		Local TVD R	Co-ordinate F eference	Reference:	Well\Rustler GL 2979.0' + 767)	Bluff 34,24,29 KB 25.01@ 30	Fed No 2H 04 00usti (Ensign
Project Site	Eddy County I Rustler Bluff 3	NM 4:24:29 Fed:-		MD Re	ference: Reference:		GL-2979.0' + 767) Grid	KB 25 0 @ 30	04:00usft (Ensign)
Well Wellbore Design	Rustler Bluff 3 Wellbore #1 Plan #1	4 24 29 Fed N	ю 2H	Survey	Calculation	Method	Minimum Cu	rvature	
Planned Survey							in an	CTUER AND ST	
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-Ŝ	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
( <b>USII</b> )	0.00	0.00	0.00	<u>(usπ)</u> 0.00	( <b>usπ)</b> 0.00	(usit) 0.00	0.00	0.00	0.00
8,332.54	0.00	0.00 - Build Rate	8,332.54 = 12,00°/100'	0.00	0.00	0.00,	0.00 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000	0.00	Ó.00
8,400.00	8.10	358.99	8,399.78	4.76	-0.08	4.76	12.00	12.00	0.00
8,500.00	20.10 32.10	358.99 358.99	8,496.59 8,586.23	29.06 72.96	-0.51 -1.28	29.07 72.98	12.00 12.00	12.00 12.00	0.00 0.00
8,700.00	44.10	358.99	8,664.78	134.54	-2.37	134.56	12.00	12.00	0.00
8,800.00	68.10	358.99	8,728.82 8,775.53	211.10 299.30	-3.71 -5.26	211.13 299.34	12.00	12.00	0.00
9,000.00	80.10 90.00	358.99 358.99	8,802.88 8,810.00	395.28 477.40	-6.95 -8.39	395.34 477 47	12.00 12.00	12.00 12.00	0.00
End Build	@ 9082.54' MD -	Hold Angle	@ <u>90.00</u> °			. YX GREA	yes a start		
9,100.00 9,200.00	90.00	358.99	8,810.00	494.85	-8.70	494.93	0.00	0.00	0.00
9,300.00	90.00	358.99	8,810.00	694.82	-12.22	694.93	0.00	0.00	0.00
9,400.00	90.00 90.00	358.99 358.99	8,810.00 8.810.00	794.81 894.79	-13.98 -15.73	794.93 894.93	0.00 0.00	0.00 0.00	0.00 0.00
9,600.00	90.00	358.99	8,810.00	994.78	-17.49	994.93	0.00	0.00	0.00
9,700.00	90.00 90.00	358.99 358.99	8,810.00 8 810 00	1,094.76 1 194 74	-19.25 -21 01	1,094.93 1 194 93	0.00 0.00	0.00 0.00	0.00
9,900.00	90.00	358.99	8,810.00	1,294.73	-22.77	1,294.93	0.00	0.00	0.00
10,000.00	90.00	358.99	8,810.00	1,394.71	-24.52	1,394.93	0.00	0.00	0.00
10,200.00	90.00	358.99	8,810.00	1,594.68	-28.04	1,594.93	0.00	0.00	0.00
10,300.00	90.00 90.00	358.99 358.99	8,810.00 8,810.00	1,694.67 1,794.65	-29.80 -31.56	1,694.93 1,794.93	0.00 0.00	0.00 0.00	0.00 0.00
10,500.00	90.00	358.99	8,810.00	1,894.64	-33.32	1,894.93	0.00	0.00	0.00
10,600.00	90.00 90.00	358.99 358.99	8,810.00 8.810.00	1,994.62 2,094.61	-35.07 -36.83	1,994.93 2.094.93	0.00 0.00	0.00 0.00	0.00
10,800.00	90.00	358.99	8,810.00	2,194.59	-38.59	2,194.93	0.00	0.00	0.00
10,900.00	90.00 90.00	358.99 358.99	8,810.00 8,810.00	2,294.57 2,394.56	-40.35 -42.11	2,294.93 2,394.93	0.00 0.00	0.00 0.00	0.00 0.00
11,100.00	90.00	358.99	8,810.00	2,494.54	-43.86	2,494.93	0.00	0.00	0.00
11,200.00	90.00 90.00	358.99 358.99	8,810.00 8,810.00	2,594.53 2,694.51	-45.62 -47.38	2,594.93 2,694.93	0.00	0.00 0.00	0.00
11,400.00	90.00 90.00	358.99 358.99	8,810.00 8.810.00	2,794.50 2,894.48	-49.14 -50.90	2,794.93 2,894.93	0.00 0.00	0.00 0.00	0.00
11,600.00	90.00	358.99	8,810.00	2,994.47	-52.65	2,994.93	0.00	0.00	0.00
11,700.00	90.00 90.00	358.99 358 99	8,810.00 8,810.00	3,094.45 3 194 44	-54.41 -56.17	3,094.93 3 194 93	0.00	0.00	0.00
11,900.00	90.00	358.99	8,810.00	3,294.42	-57.93	3,294.93	0.00	0.00	0.00
12,000.00	90.00	358.99	8,810.00	3,394.40	-59.69	3,394.93	0.00	0.00	0.00
12,200.00	90.00	358.99	8,810.00	3,594.37	-63.20	3,594.93	0.00	0.00	0.00
12,300.00	90.00 90.00	358.99 358.99	8,810.00 8,810.00	3,694.36 3,794.34	-64.96 -66.72	3,694.93 3,794.93	0.00 0.00	0.00 0.00	0.00 0.00
12,500.00	90.00	358.99	8,810.00	3,894.33	-68.48	3,894.93	0.00	0.00	0.00
12,600.00	90.00 90.00	358.99 358 99	8,810.00 8,810.00	3,994.31 4,094 30	-70.24 -71 99	3,994.93 4 094 93	0.00	0.00	0.00
12,800.00	90.00	358.99	8,810.00	4,194.28	-73.75	4,194.93	0.00	0.00	0.00
12,900.00	90.00	358.99 358.99	8,810.00	4,294.27 4,394.25	-75.51 -77.27	4,294.93 4,394.93	0.00 0.00	0.00	0.00

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## Planning Report

Database:	STXWP_EDM Chevron USA	1 //Inc		ocal/Co₌ordinate VD Reference	Reference: 7 W	Vell'Rustler Blu IL-2979:0: +;KE	f 34 24 29 Fe 25:0' @ 3004	d/No.2H 100usft (Ensign /
Project:	Eddy County,	NM		D Reference:	C	67) L,2979.0';+ KE	25:0 @ 3004	1.00usft₁(Ensign≯(
Site Well Wellbore Design	Rüstler Bluff 3 Rustler Bluff 3 Wellbore #1- Plan #1	4 24 29 Fed 4 24 29 Fed No 4 24 29 Fed No	2H S	orth Reference urvey Calculation	n/ <b>Method</b> : M	ori) Inimum Curval	ure	
Planned/Survey Measured Depth: (üsit):	Inclination (°)	Ve Azimutht - ⊉ (() (1	rtical epth: +N/-S jsft) (Lisft)	+E/-W (usft)	Ventical [ Section (ustt) (?/	Dogleg E Rate f 100usft): (\$/1	uild late DOusft). (°/;	Turn Rate I00usft)
13,100.00 13,200.00 13,300.00 13,400.00 13,500.00	90.00 90.00 90.00 90.00 90.00 90.00	358.99 8 358.99 8 358.99 8 358.99 8 358.99 8 358.99 8	,810.00 4,494. ,810.00 4,594. ,810.00 4,694. ,810.00 4,694. ,810.00 4,794. ,810.00 4,894.	24 -79.03 22 -80.79 20 -82.54 19 -84.30 17 -86.06	4,494.93 4,594.93 4,694.93 4,794.93 4,894.93	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00
13,600.00 13,700.00 13,800.00 13,837.88 TD @ 1383	90.00 90.00 90.00 90.00 7.88' MD - Rusi	358.99 8 358.99 8 358.99 8 358.99 8 358.99 8 <b>Iler Bluff 34 24 2</b>	8,810.00 4,994. 9,810.00 5,094. 9,810.00 5,194. 9,810.00 5,232. 9 Fed 2H BHL	16 -87.82 14 -89.58 13 -91.33 00 -92.00	4,994.93 5,094.93 5,194.93 5,232.81	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
Design Targets Tårget Name hivmiss target Shape	Dip Angle (°)	Dip Dir. → TVD (â)	+N/-S (ușft) (I	E∕₌W Northj Isft) (usft	ng Eastin ) (usft)	9 Ljat	tude	Longitude
Rustler Bluff 34 24 2 - plan hits target - Rectangle (sid	29 0.00 t center es W100.00 H4,	358.99 8,810.0 755.35 D50.00)	00 5,232.00	-92.00 429,4	612,2	35.00 32° 10	' 48.112 N 1	03° 58' 14.049 W
Plāni Annotations Meas De	Sured Verti pth Dep sft) (usf	cal) Lo th +N/-S t) (usft	ical Coordinates S ∔E/₂V (⊔sft	v ) Commei	nt <sup>a</sup>			<u>. 6. serve e</u>
8,3 8,3 9,0 9,0 13,8	332.54 8,33 332.54 8,33 382.54 8,81 382.54 8,81 337.88 8,81	32.54 32.54 0.00 4 0.00 4 0.00 5,23	0.00 0.00 77.39 77.40 32.00 -{	0.00 Start Bui 0.00 Build Ra -8.39 End Build -8.39 Hold Ang 92.00 TD @ 13	Id @ 8332.54' MI te = 12.00°/100' d @ 9082.54' MC gle @ 90.00° 837.88' MD	)		

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GE Oil & Gas



 This drawing is the property of GE Oil & Gas Pressure Control LP and is considered confidential. Unless otherwise approved in writing, neither it nor its contents may be used, copied, transmitted or reproduced except for the sole purpose of GE Oil & Gas Pressure Control LP.
 CHEVRON USA, INC. DELAWARE BASIN

 13-3/8" x 9-5/8" x 5-1/2" x 2-7/8" 10M SH2/Conventional Wellhead Assembly, With DSA, T-EBS-F Tubing Head, T-EN Tubing Hanger and A5PEN Adapter Flange
 DRAWN
 VJK
 19MAR13

 FOR REFERENCE ONLY DRAWING NO.
 AE23705

#### **BLOWOUT PREVENTOR SCHEMATIC Minimum Requirements OPERATION** : Intermediate and Production Hole Sections Minimum System Pressure Rating : 5,000 psi SIZE PRESSURE DESCRIPTION **Bell Nipple** A N/Å в Annular 13 5/8 5,000 psi Ċ 13 5/8 5,000 psi **Flowline to Shaker** Pipe Ram Α D 5,000 psi 13 5/8 **Blind Ram** Fill Up Line Е 5,000 psi 13 5/8" Mud Cross F DSA As required for each hole size в C-Sec B-Sec 13-5/8" 5K x 11" 5K 13-3/8" SOW x 13-5/8" 5K A-Sec Kill Line C SIZE PRESSURE DESCRIPTION 2' 5.000 psi Gate Valve 2" 5.000 psi **Gate Valve** 2" 5,000 psl **Check Valve** D Choke Line to Choke Manifold- 3" Kill Line- 2" minimum minimum Choke Line 0 Е DESCRIPTION SIZE PRESSURE 5,000 psi Gate Valve 3" HCR Valve 5,000 psi HCR Valve 3" **Installation Checklist** The following item must be verified and checked off prior to pressure testing of BOP equipment. The installed BOP equipment meets at least the minimum requirements (rating, type, size, configuration) as shown on this schematic. Components may be substituted for equivalent equipment rated to higher pressures. Additional components may be put into place as long as they meet or exceed the minimum pressure rating of the system. All valves on the kill line and choke line will be full opening and will allow straight though flow. The kill line and choke line will be straight unless turns use tee blocks or are targeted with running tess, and will be anchored to prevent whip and reduce vibration. Manual (hand wheels) or automatic locking devices will be installed on all ram preventers. Hand wheels will also be installed on all manual valves on the choke line and kill line. A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will remain open unless accumulator is inoperative. Upper kelly cock valve with handle will be available on rig floor along with safety valve and subs to fit all drill string connections in use. After Installation Checklist is complete, fill out the information below and email to Superintendent and Drilling Engineer Weilname: **Representative:** Date:



	BOPE Testing							
	Minimum Requirements							
	The following it pressure testin	em must be performed g of BOP equipment. T	, verified, and check his must be repeate	ed off at least once pe d after 6 months on the	r well prior to low/high same well.			
	Precharge pressure for each accumulator bottle must fall within the range below. Bottles may be further charged with nitrogen gas only. Tested precharge pressures must be recorded for each individual bottle and kept on location through the end of the well. Test will be conducted prior to connecting unit to BOP stack.							
Cher one ti appli	Accumulator working pressure rating	Minimum acceptable operating pressure	Desired precharge pressure	Maximum acceptable precharge pressure	Minimum acceptable precharge pressure			
	1500 psi	1500 psi	750 psi	800 pši	700 psi			
	2000 psi	2000 psi	1000 psi	1100 psi	900 psi			
L	j <u>3000 psi</u>	3000 psi	1000 psi	1100 psi	.900 psi			
	Accumulator will have so rams, close the annular pressure (see table abov with test pressure recor	ufficient capacity to or preventer, and retain a (e) on the closing mani ded and kept on locati	ien the hydraulically minimum of 200 ps fold without the use on through the end o	controlled choke line t above the maximum a of the closing pumps, f the well	valve (if used), close all cceptable precharge This test will be performed			
	Accumulator fluid reserv will be maintained at ma be recorded. Reservoir location through the end	róir will be double the i nutacturer's recomme fluid level will be recor l of the well.	usable fluid volume c ndations, Usable flu ded along with mani	f the accumulator syst id volume will be recor facturer's recommend	em capacity. Fluid level ded. Reservior capacity will ation. All will be kept on			
	Closing unit system will preventers.	have two independent	power sources (not	counting accumulator	bottles) to close the			
	Power for the closing un when the closing valve r accumulator pump is "O	it pumps will be availa nanifold pressure decr N° during each tour ch	ble to the unit at all eases to the pre-set ange.	times so that the pump level. It is recommend	os will automatically start ed to check that air line to			
	With accumulator bottle (if used) plus close the a psi above maximum acc closing time will be reco	s isolated; closing unit innular preventer on th eptable precharge pre- rided and kept on local	will be capable of o e smallest size drill ssure (see table abo tion through the end	pening the hydraulical pipe within 2 minutes a re) on the closing mani of the well.	y-operated choke line valve nd obtain a minimum of 200 fold, Test pressure and			
	Master controls for the E all preventer and the ch	BOPE system will be lo oke line valve (if used)	cated at the accumu	lator and will be capab	le of opening and closing			
	Remote controls for the floor (not in the dog hou	BOPE system will be r se). Remote controls v	eadily accessible (cl vill be capable of clo	ear path) to the driller sing all preventers.	and located on the rig			
	Record accumulator tes	ts in drilling reports ân	d IADC sheet					
		BOPE T	est Checklist	ĸ				
	म	e following item must	be ckecked off prior	to beginning test				
	BLM will be given at leas	st 4 hour notice prior to	o beginning BOPE te	sting				
· 🔲	Valve on casing head be	low test plug will be o	pen					
	Test will be performed u	sing clear water.						
	The follow	ving item must be perf	ormed during the BO	PE testing and then ch	ecked off			
	BOPE will be pressure to following related repairs party on a test chart and	ested when initially ins , and at a minimum of I kept on location thro	talled, whenever an 30 days intervals.  T igh the end of the w	r seal subject to test pr est pressure and times ell.	ressure is broken, will be recorded by a 3rd			
	Test plug will be used							
	Ram type preventer and	all related well contro	l equipment will be t	ested to 250 psi (low) :	and 5,000 psi (high).			
	Annular type preventer v	vill be tested to 250 ps	i (low) and 3,500 psi	(high).				
	Valves will be tested fro held open to test the kill	m the working pressur   line valve(s)	e side with all down	stream valves open. T	he check valve will be			
	Each pressure test will b	e held for 10 minutes	with no allowable le	ak off.	· ·			
	Master controls and rem	ote controls to the clo	sing unit (accumulat	or) must be function te	sted as part of the BOP testing			
	Record BOP tests and p	ressures in drilling repo	orts and IADC sheet					
Afte <u>with</u>	r Installation Checklist is any/all BOP and accumu	complete, fill out the i lator test charts and re	nformation below ar ports from 3rd partic	d email to Superintend <u>s</u> .	lent and Drilling Engineer <u>along</u>			
	Wellnar	ne:	•					
	Representati	ve:		······································				
	Da	nte:						



# Midwest Hose & Specialty, Inc.

Customer:	ODESSA		Customer P.O 19307	. Number 72	
	HOSE SPECI	FICATIONS		`	
Type: Rotary/Cl	IOKE KILL		<b>.</b>		
GRADE E	/ API 7K		Hose Length:	25' FEE	
I,D, 3	" INCHES	O.D.	4.77	ÎNCHES	
WORKING PRESSURE	TEST PRESSUR	ŔE	BURST PRESSU	RE	
10,000 PSI	15,000	PSI	N/A	PS	
	COUF	2LINGS			
Part Number	Stem Lot Nur	mber	Ferrule Lot N	lumber	
E3.0X64WB			L08301	765	
E3.0X64WB	1		L08301	765	
Type of Coupling:	- 1	E DE			
SWAGE	2-11	5.25			
	PROC	EDURE			
······································		tres training of a state of		•	
<u>Hose assemi</u> TIME HELD A	ory pressure tested w AT TEST PRESSURE	ACTUAL I	<u>ni temperature</u> . BURST PRESSURE	:	
: <u>-</u> - :					
3 1/	2 MIN.	Hopo Corici I	N/A	PSI	
TOSE ASSEMDLY SE 21233	iai Number: 2				
Comments:	<u>*** **** ****************************</u>	. <b>1</b>			
Date:	Tested:	<u> </u>	Approved:	10	
8/7/2013			Her 1	Glance	
• • • • • • • • • • • • • • • • • • • •	". <b>1</b>	······	· 0	<u> </u>	



**Comments:** Hose assembly pressure tested with water at ambient temperature.

Tested By: Ryan, Malone

Approved By: Ryan Adams

TSAL





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# H<sub>2</sub>S Preparedness and Contingency Plan Summary



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# Rustler Bluff 34-24-29 Fed Com 2H

# Training

MCBU Drilling and Completions  $H_2S$  training requirements are intended to define the minimum level of training required for employees, contractors and visitors to enter or perform work at MCBU Drilling and Completions locations that have known concentrations of  $H_2S$ .

# **Awareness Level**

Employees and visitors to MCBU Drilling and Completions locations that have known concentrations of  $H_2S$ , who are not required to perform work in  $H_2S$  areas, will be provided with an awareness level of  $H_2S$  training prior to entering any  $H_2S$  areas. At a minimum, awareness level training will include:

- 1. Physical and chemical properties of H<sub>2</sub>S
- 2. Health hazards of H<sub>2</sub>S
- 3. Personal protective equipment
- 4. Information regarding potential sources of H<sub>2</sub>S
- 5. Alarms and emergency evacuation procedures

Awareness level training will be developed and conducted by personnel who are qualified either by specific training, educational experience and/or work-related background.

# Advanced Level H<sub>2</sub>S Training

Employees and contractors required to work in areas that may contain  $H_2S$  will be provided with Advanced Level  $H_2S$  training prior to initial assignment. In addition to the Awareness Level requirements, Advanced Level  $H_2S$  training will include:

- 1. H<sub>2</sub>S safe work practice procedures;
- 2. Emergency contingency plan procedures;
- 3. Methods to detect the presence or release of H<sub>2</sub>S (e.g., alarms, monitoring equipment), including hands-on training with direct reading and personal monitoring H<sub>2</sub>S equipment.
- 4. Basic overview of respiratory protective equipment suitable for use in H<sub>2</sub>S environments. Note: Employees who work at sites that participate in the Chevron Respirator User program will require separate respirator training as required by the MCBU Respiratory Protection Program;
- 5. Basic overview of emergency rescue techniques, first aid, CPR and medical evaluation procedures. Employees who may be required to perform "standby" duties are required to receive additional first aid and CPR training, which is not covered in the Advanced Level H<sub>2</sub>S training;
- 6. Proficiency examination covering all course material.

Advanced H<sub>2</sub>S training courses will be instructed by personnel who have successfully completed an appropriate H<sub>2</sub>S train-the-trainer development course (ANSI/ASSE Z390.1-2006) or who possess significant past experience through educational or work-related background.

# H<sub>2</sub>S Preparedness and Contingency Plan Summary



# H<sub>2</sub>S Training Certification

All employees and visitors will be issued an  $H_2S$  training certification card (or certificate) upon successful completion of the appropriate  $H_2S$  training course. Personnel working in an  $H_2S$  environment will carry a current  $H_2S$  training certification card as proof of having received the proper training on their person at all times.

# **Briefing Area**

A minimum of two briefing areas will be established in locations that at least one area will be upwind from the well at all times. Upon recognition of an emergency situation, all personnel should assemble at the designated upwind briefing areas for instructions.

# H<sub>2</sub>S Equipment

# **Respiratory Protection**

- a) Six 30 minute SCBAs 2 at each briefing area and 2 in the Safety Trailer.
- b) Eight 5 minute EBAs 5 in the dog house at the rig floor, 1 at the accumulator, 1 at the shale shakers and 1 at the mud pits.

# **Visual Warning System**

- a) One color code sign, displaying all possible conditions, will be placed at the entrance to the location with a flag displaying the current condition.
- b) Two windsocks will be on location, one on the dog house and one on the Drill Site Manager's Trailer.

# H<sub>2</sub>S Detection and Monitoring System

- a) H<sub>2</sub>S monitoring system (sensor head, warning light and siren) placed throughout rig.
  - Drilling Rig Locations: at a minimum, in the area of the Shale shaker, rig floor, and bell nipple.
  - Workover Rig Locations: at a minimum, in the area of the Cellar, rig floor and circulating tanks or shale shaker.

# H<sub>2</sub>S Preparedness and Contingency Plan Summary



# **Well Control Equipment**

- a) Flare Line 150' from wellhead with igniter.
- b) Choke manifold with a remotely operated choke.
- c) Mud / gas separator

# **Mud Program**

In the event of drilling, completions, workover and well servicing operations involving a hydrogen sulfide concentration of 100 ppm or greater the following shall be considered:

- 1. Use of a degasser
- 2. Use of a zinc based mud treatment
- 3. Increasing mud weight

# **Public Safety - Emergency Assistance**

Agency	Telephone Number
Eddy County Sheriff's Department	575-887-7551
Fire Department:	
Carlsbad	575-885-3125
Artesia	575-746-5050
Carlsbad Medical Center	575-887-4100
Eddy County Emergency Management	575-628-5450
Poison Control Center	800-222-1222



# H<sub>2</sub>S Preparedness and Contingency Plan Summary

# **Chevron MCBU D&C Emergency Notifications**

Below are lists of contacts to be used in emergency situations.

	Name	Title	Office Number	Cell Phone
1.	Matt Kubachka	Drilling Engineer	(713) 372-5721	(432) 438-2482
2.	Phil Clark	Superintendent	(713) 372-7588	(832) 741-4175
5.	Kim McHugh	Drilling Manager	(713) 372-7591	(713) 204- 8550
6.	Darrell Hammons	Operations Manager	(713) 372-5747	(281) 352 2302
7.	Andrea Calhoun	D&C HES	(713) 372-7586	(832) 588-0100
8.	Andrew Espinosa	Completion Engineer	(713) 372-7587	(713) 294-9534

Exhibit E



ONSHORE ORDER NO. 1 Chevron

#### SURFACE USE PLAN

CONFIDENTIAL - TIGHT HOLE

## ONSHORE OIL & GAS ORDER NO. 1 Approval of Operations on Onshore Federal and Indian Oil and Gas Leases

#### Rustler Bluff 34 24 29 Fed Com 2H

276' FNL and 2205' FEL of S3 T25S-R29E Section 34, Township 24, Range 29 Eddy County, New Mexico

### A. EXISTING ROADS/LEASE ROADS

Driving directions are from Malaga, New Mexico. Proceed east on Duarte Road approximately 1.3 miles to McDonald Road (CR 748) and follow this road approximately 9 miles and turn southeast on an existing road and go 5.5 miles to location in Section 3.

This lease road is approximately 20' in travel way width and approximately 2 miles in length with a maximum disturbance area of 30' has been used, and in accordance with guidelines set forth in the BLM Onshore Orders. No turnouts are expected.

Existing county and lease roads will be used to enter proposed access road.

The existing road is measured from McDonald Road.

Total Length of Existing Roads:

Total Length of New Roads:

35,275.56'

30.546.24'

= 30,546.24' existing roads

+ 3275.56' from the existing roads to the facility

+ 1719.14' from the facility to the well

Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.

Location, access, and vicinity plats attached hereto. See Exhibits A-1 to A-3. Please see Exhibit A2 for the location of the access road to the well pad. Please see Exhibit H for the location of the access road to the proposed facilities.

Chevron will maintain existing roads in a condition the same or better than before operations begin. All existing structures on the entire access route such as cattle guards, culverts, fences, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use. All pot holes, drainages, road crowns, etc., will be repaired to maintain current road conditions. We will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or high wind events. BLM written approval will be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.

#### SURFACE USE PLAN

#### B. <u>NEW OR RECONSTRUCTED ACCESS ROADS</u>

The access road has not been constructed.

The new access road will be upgraded to a crowned and ditched road and will be graveled as needed for drilling. If requested by the surface owner, upgrading of this portion of the road will be kept to a minimum.

The existing two-track road identified in the survey plat will be upgraded to an oil and gas road (14' wide). Please see **Exhibit A2 and H** to view the access road. The access road and flowline follow the same route. For distances between PIs, please see **Exhibit G2**, the legal description of flowline plat.

All existing roads (previously improved) will be used "as is" with the exception of minor blading as needed.

Surface disturbance and vehicular travel will be limited to the approved access route. Any additional area will be approved in advance.

Road Width: 14 – 20 feet traveling surface.

Maximum Grade: Road gradient less than 8%

Crown Design: 2%

Turnouts will be installed along the access route as needed.

Ditch design: Drainage, interception and outlet.

Erosion Control: 6" rock under road.

Re-vegetation of Disturbed Area: All disturbed areas will be seeded by Broadcast or Drill and Crimp. Ground conditions will determine the method used.

Cattle guard(s) will be installed as needed.

Major Cuts and Fills: 2:1 Slope.

Surfacing material (road base derived from caliche or river rock) will be placed on the access road during construction. All surface disturbing activities will be discussed with and agreed to with the surface owner.

#### C. LOCATION OF EXISTING WELLS

All wells located within a 1-mile radius of the Surface & Bottom Hole Location. See Exhibit B.

#### D. LOCATION OF PRODUCTION FACILITIES

It is anticipated that production facilities will be located in Section 3 being east of the well and oil to be sold at that tank battery. Oil and gas measurement will be installed on this well location. See Exhibit C.

The facility will be located in the NE corner of S3 T25S-R29E. Please see Exhibit F for the individual survey plat of the offsite production facility and **Exhibit H** for the access road to the facility. This plat depicts the offsite production facility including the access road, accurate dimensions of the facility pad, flare dimensions, and tie-in points to section corner.

The production line will be buried 3 1/2" Fiberglass Pipe with a working pressure greater than 100 psi ran along existing disturbances.

The proposed flowline will begin at the southeast corner of the Rustler Bluff 33-24-29 1H well pad and will continue to the Rustler Bluff 34-24-29 2H well until it terminates at the Section 34 facility pad. The total pipeline length will be for 8,821'. The length of the pipeline from Rustler Bluff 34-24-29 2H well until it terminates at the Section 34 facility pad will be approximately 2430'. The pipeline will be buried 15' from the road. 10' of ROW will be cleared on either side of the pipeline. Please see **Exhibit G** to view the proposed pipeline.

The permanent water disposal system will be determined prior to construction of any water transfer pipeline. Until permanent water takeaway is available, produced water will be hauled off location in trucks.

Utility power is anticipated in mid/late 2015. For a temporary power solution, Chevron will install generators to provide power for operations. Once utility power becomes available, a power line will be constructed as shown on the plats. Please see **Exhibit I**.

Note: Facility plats show flare pad adjacent to the facility pad. Currently, Chevron does not plan to install a flare, but plans may change depending on gas takeaway provider.

#### E. LOCATION AND TYPES OF WATER SUPPLY

Chevron will utilize the frac pond in section 2-T25S-R29E for fresh water. Chevron will submit a "Multi-Well Fluid management pit Business Lease" to the State for the Frac Pond. Please see **Exhibit H** for the location of the frac pond.

During frac operations, Chevron will lay a temporary 12" flowline from the frac pond to the well. The flowline will follow within 5 feet along the access road from the frac pond to the well using the same route as the proposed production pipeline depicted on **Exhibit G**.

Water will be obtained from a private water source. The source provider and exact location have not been finalized at this time. Most likely, Chevron expects to transfer water from the source well or distribution center using a temporary 4" poly pipe transfer line. Chevron will submit a sundry notice at a later date, including a plat that depicts the proposed location of the temporary 4" poly pipe transfer line to fill the frac pond.

#### CONFIDÉNTIAL – TIGHT HOLE

#### SURFACE USE PLAN

#### F. <u>CONSTRUCTION MATERIALS</u>

All construction materials will be used from the nearest Private, BLM, or State pit. All material (i.e. shale) will be acquired from private or commercial sources.

No construction material will be needed for well pad construction; subsurface spoil material will be utilized.

Surfacing material (caliche) will be purchased from a supplier having a permitted source of materials.

The entire location will be fenced with barb/woven wire and bermed with spoil dirt or gravel.

### G. METHODS FOR HANDLING WASTE DISPOSAL

A closed system will be utilized consisting of above ground steel tanks.

All wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in a state approved facility.

Disposal of cuttings: Tervita, LLC

Sewage and gray water before and after treatment are not allowed to be discharged to the ground. They are collected from storage tank(s) and portable potty at drilling and completions locations and transported by an approved transporter to be disposed of at a Chevron's select-for-use disposal facility.

H. <u>ANCILLARY FACILITIES</u> None.

#### I. WELLSITE LAYOUT

The proposed site layout plat is attached showing the Ensign Rig #767 orientation and equipment location. See Exhibit D.

In order to level the location, cut and fill will be required. Please see attached Well Location and Acreage Dedication Plat – **Exhibits A-1 to A-3**.

A locking gate will be installed at the site entrance.

Any fences cut will be repaired. Cattle guards will be installed, if needed.

#### SURFACE USE PLAN

#### J. PLANS FOR RECLAMATION OF THE SURFACE

#### In the Event of Production

Within 6 months, Chevron will contact BLM Surface Management Specialists to devise the best strategies to reduce the size of the location. Current plans for interim reclamation will consist of reclaiming the pad to +/-50 feet outside the anchors, or approximately 200 x 200 feet. See Exhibit E.

In addition, the following procedures shall be followed:

- i. Caliche will be removed from areas to be reclaimed, to increase the success of revegetating the site. Removed caliche that is free of contaminents may be used for future projects.
- ii. The portions of the cleared well site not needed for operational and safety purposes will be recontoured to a final or intermediate contour that blends with the surrounding topography as much as possible. Sufficient level area remains for setup of a workover rig and to park equipment.
- iii. All surface soil materials (topsoil) are to be removed from the entire cut and fill area and temporarily stockpiled for reuse during interim reclamation. Topsoil will be respreads over areas not needed for all-weather operations to ensure successful revegetation. Any topsoil pile set aside should be revegetated to prevent it from eroding and to help maintain its biological viability.
- iv. After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture advised by the BLM. The seed mix will be evenly and uniformly distributed over the disturbed area. Seeding will be accomplished by using a drilling or, when drilling is not available, by broadcasting the seed. When broadcasting the seed, the amount of seed shall be doubled.
- v. Weed control will be used on disturbed land, including the roads, pads, associated pipeline corridor, and adjacent land affected by the operations. There shall be no primary or secondary noxious weeds in the seed mixture used for reseeding.

#### In the Event of a Dry Hole/Final Reclamation

Upon final abandonment of the well, a new reclamation plan will be submitted with the Notice of Intent to Abandon (NIA) or Subsequent Report Plug and Abandon (SRA) using the Sundry Notices and Reports on Wells Form 3160-5. The location will be restored to as near as original condition as possible. Reclamation of the surface shall be done in strict compliance with the existing New Mexico Oil Conservation Division regulations and BLM regulations.

In addition, the following procedures shall be followed:

- i. Caliche material from the well pad and access road will be removed and utilized to recontour to a final contour that blends with the surrounding topography as much as possible. Any caliche material not used will be utilized to repair roads within the lease.
- ii. On sloped ground, the topsoil and interim vegetation will be restripped from portions of the site that are not at the original contour, the well pad recontoured, and the topsoil will be respread over the entire disturbed.

#### ONSHORE ORDER NO. 1 Chevron

#### SURFACE USE PLAN

- iii. Topsoil will be distributed over the reclamation area and cross ripped to control erosion
- iv. After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture advised by the BLM. The seed mix will be evenly and uniformly distributed over the disturbed area. Seeding will be accomplished by using a drilling or, when drilling is not available, by broadcasting the seed. When broadcasting the seed, the amount of seed shall be doubled.
- v. Weed control will be used on disturbed land, including the roads, pads, associated pipeline corridor, and adjacent land affected by the operations. There shall be no primary or secondary noxious weeds in the seed mixture used for reseeding.

## K. <u>SURFACE TENANT</u>

Name	BLM # 7036				
	Pierce Canyon Ranch <sup>,</sup>				
	c/o Draper Brantley & Henry McDonald				
Address	P.O. Box 597				
r	Loving, NM 88256				
Phone Number	575-499-5011				

#### ROAD OWNERSHIP

All access roads are located on Private & Federal lands.

## ROAD OWNERSHIP SURFACE TENANTS

Section	Section 29-24-30
Name	BLM # 7036
	Pierce Canyon Ranch
	c/o Draper Brantley & Henry McDonald
Address	P.O. Box 597
	Loving, NM 88256
Phone Number	575-499-5011

Section	Section 32-24-30
	Sections 5, 6 & 7-25-30
	Sections 1 & 2- 25-29, Eddy Co., NM
Name	#GO-1294
	J.R. Engineering & Construction
	Attn: Jimmy Richardson
Address	P.O. Box 487
	Carlsbad, NM. 88221
Phone Number	575-706-4063

There are no Deeded Surface owners that will be impacted by the Section 33 & 34 operations or access routes.

#### SURFACE USE PLAN

# L. ADDITIONAL INFORMATION

Class III cultural resource inventory report was prepared by Boone Archaeological Services, Carlsbad, New Mexico for the proposed location. A copy of the report has been sent to the BLM office under separate cover.

## CERTIFICATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations of 18 U.S.C. 1001 for the filing of a false statement.

Executed this <u>28</u> day of <u>March</u>, 20<u>14</u>

Name:

Wojtasek - Project Manager

Address: <u>1400 Smith Street, 40039</u> Houston, TX 77027

Office <u>713-372-9691</u>

E-mail: kellyanne@chevron.com

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CHEVRON USA
LEASE NO.:	NM118714
WELL NAME & NO.:	2H-RUSTLER BLUFF 34 24 29 FED COM
SURFACE HOLE FOOTAGE:	276' FNL & 2205' FEL
BOTTOM HOLE FOOTAGE	330' FNL & 2205' FEL (T. 24,E., R. 29. S., Sec. 34)
LOCATION:	Section 3 T. 25 S., R. 29 E., NMPM
COUNTY:	EDDY COUNTY, NEW MEXICO
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## TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.



#### I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

# **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## V. SPECIAL REQUIREMENT(S)

#### **Access Road Construction Requirements**

1. Low Water Crossing

A low water crossing shall be constructed on the access road where drainages/arroyos cross the road. The low water crossing shall be accomplished by dipping the road down to the bed of the drainage. Material moved from the banks of the crossing shall be stockpiled near the road edge. Gravel or cobble shall be used as the primary material for the road bed in the low water crossing.

#### 2. <u>Cattle Guard</u>

Where entry is granted across a fence line for the access road, the fence must be braced and tied off on both sides of the passageway with H-braces prior to cutting. Once the work is completed, the fence will be restored to its prior condition with an appropriately sized cattle guard sufficient to carry out the project. Any new or existing cattle guards on the access route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations. Once the road is abandoned, the fence would be restored to its prior condition, or better. The operator shall notify the private property owner or the grazing allotment holders prior to crossing any fences.

#### Livestock Water Pipeline Requirements

The access road, electric line, and production pipeline cross over a livestock water pipeline. The operator/contractor must contact the allotment holder prior to construction to identify the location of the livestock water pipeline. The livestock water pipeline will be identified with signage by the operator throughout the life of the well. The operator must take measures to protect the pipeline from compression or other damages. If the pipeline is damaged or compromised in any way near the proposed project as a result of oil and gas activity, the operator is responsible for repairing the pipeline immediately. The operator must notify the BLM office (575-234-5972) and the grazing allotment holder if any damage occurs to structures that provide water to livestock.

#### Frac Pond Requirements

Since the frac pond is located on state land, the operator must approval from the state to construct the frac pond. Since the frac pond is being constructed to service the proposed federal well, the following must be adhered to.

A copy of the application (APD) and attachments, including stipulations, survey plat and diagram, will be on location during construction. BLM personnel may request to see a copy of your permit during construction to ensure compliance with all conditions of approval.

Holder agrees to comply with the following conditions of approval to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this permit.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated.

3. Required Standard Conditions of Approval:

#### a. Notification

Contact the Supervisory Environmental Protection Specialist, Jim Amos, at 575-234-5909 at least 24 hours prior to starting construction.

b. Freshwater Only

The frac pond will only be authorized to contain freshwater and testing of water quality is required. Additives are not allowed without consent of the authorized officer in writing.

## c. <u>Contamination</u>

If at any time the water in the frac pond becomes polluted with salts or other contaminants, use of the frac pond will cease and desist, and all liquids will be removed from the frac pond and disposed of properly. The operator will preclude releases of oil into open pits. The operator must remove any accumulation of oil, condensate, or contaminant in a pit within 48 hours of discovery.

#### d. Authorized Disturbance

Confine all construction and maintenance activity to the approved authorized area applied for in the application.

e. Facilities

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations. Grey-water, sewage, and trash shall be removed from the site and disposed of properly at a state approved facility.

f. Escape Ramps

The operator will construct and maintain frac ponds to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in frac ponds. Escape ramps must be installed at every corner of the frac pond and in the center of each side if that side exceeds 100 feet in length. Escape ramps must be in contact with the side of the frac pond, bottom of the frac pond, and the top of the frac pond berm. Escape ramps <u>cannot</u> be made of metal and <u>cannot</u> be steeper than a 3:1 slope (Horizontal Distance: Vertical Distance) or 30% slope. (*Examples of escape ramps: 12'' wide wooden planks wrapped in matting, felt lining, etc.*)

g. Frac Pond Pipelines

Temporary pipelines flowing from the frac pond to the target well will be laid along existing roadways unless an exception has been granted by the authorized officer in writing.

#### h. Mineral Material from Excavation

Mineral materials extracted during construction of the frac pond will be stored onlocation and/or used for constructing the frac pond. i. Frac Pond Liner

The frac pond will be lined with at least a 30 mil. plastic liner. The plastic lining will be removed prior to final abandonment.

j. <u>Topsoil Stockpile</u>

The operator shall strip at least the top 6 inches of soil (root zone) from the entire frac pond area and stockpile the topsoil approximately 25 feet outside the bermed perimeter of the pond in a low profile manner, reasonably protected from wind and water erosion. Topsoil shall not be used for constructing the frac pond. The topsoil will be used for final reclamation purposes only.

#### . Frac Pond Fence

The operator will install and maintain exclosure fencing on all sides of the frac pond to prevent access to public, livestock, and large forms of wildlife. The fence shall be installed at the base of the berm and never on top of the berm. Construction of the fence shall consist of steel and/or wooden posts set firmly into natural ground. Hog panel or chain-link fencing must be used as the fence and tied securely to the fence posts. Barbed-wire fencing or electric fences <u>shall not</u> be used. The fence height <u>shall not</u> be shorter than six (6) feet. The erected fence

shall be maintained in adequate condition until the frac pond is reclaimed.

1. Erosion Prevention

Install earthen erosion-control structures as are suitable for the specific terrain and soil conditions.

### m. <u>Reclamation Start</u>

- I. Reclamation efforts will commence immediately after the frac pond is no longer needed for the purpose of completing wells.
- II. Within 3 months of completion of frac operations on associated wells, all earthwork and final reclamation must be completed. This includes reclaiming and/or removal of:
  - i. Any roads approved for use with the pond
  - ii. Surface water lines
  - iii. Tanks, pumps, fencing etc.

#### Requirements for Operations and Final Reclamation:

4. If, during any phase of the construction, operation, maintenance, or termination of the frac pond, any pollutant should be released from the contaminated frac pond, the control and total removal, disposal, and cleaning up of such pollutant, wherever found, shall be the responsibility of holder, regardless of fault.

Upon failure of holder to control, dispose of, or clean up such discharge, or to repair all damages resulting there-from, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

6. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

7. After all disturbed areas have been satisfactorily contoured and prepared for seeding the location needs to be revegetated with the seed mixture provided. Seeding may need to be repeated until revegetation is successful. Operators shall contact Jim Amos, Supervisor, Environmental Protection – (575)234-5909, **prior** to beginning surface reclamation operations.

8. Seeding is required: Use the following seed mix.

() seed mixture 1	·	(	) seed mixture 3	
(x) seed mixture 2		(	) seed mixture 4	
() LPC mixture		(	) Aplomado Falcon mix	

#### **Communitization Agreement**

A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales. In addition, the well sign shall include the surface and bottom hole lease numbers. If the Communitization Agreement number is known, it shall also be on the sign. If not, it shall be placed on the sign when the sign is replaced.

## VI. CONSTRUCTION

## A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

### **B. TOPSOIL**

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

#### C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

#### D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

#### E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

#### F. EXCLOSURE FENCING (CELLARS & PITS)

#### Exclosure Fencing

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

#### G. ON LEASE ACCESS ROADS

#### Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

#### Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

#### Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

#### Ditching

Ditching shall be required on both sides of the road.

#### Turnouts

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

#### Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

#### **Cross Section of a Typical Lead-off Ditch**



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

#### Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope:  $\underline{400'} + 100' = 200'$  lead-off ditch interval  $\underline{4\%}$ 

#### **Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.





## VII. DRILLING

#### A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)
  - Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

- 1. Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.
- Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. If the drilling rig is removed without approval an Incident of Non-Compliance will be written and will be a "Major" violation.
- 3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
- 4. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The top and bottom of Salt are to be recorded on the Completion Report.

#### **B.** CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#).

Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

#### Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

#### Medium Cave/Karst

Possible water flows in the Castile and Delaware. Possible lost circulation in the Salado, Delaware, and Bone Spring.

- 1. The 13-3/8 inch surface casing shall be set at approximately 400 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. If salt is encountered, set casing at least 25 feet above the salt.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

- 2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

#### C. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor. If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

- 3. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi. 5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's
  - representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

- a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
- b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.
- c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- d. The results of the test shall be reported to the appropriate BLM office.
- e. All tests are required to be recorded on a calibrated test chart. A copy of the

# **BOP/BOPE** test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

## D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

#### E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion 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.

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## VIII. PRODUCTION (POST DRILLING)

#### A. WELL STRUCTURES & FACILITIES

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

#### **Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

#### **Containment Structures**

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the

largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

#### Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, <u>Shale Green</u> from the BLM Standard Environmental Color Chart (CC-001: June 2008).

#### **B. PIPELINES**

#### BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, <u>et seq</u>. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, <u>et seq</u>.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to

repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be  $\underline{30}$  feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed <u>30</u> feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The 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 braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

(	) seed	mixture 1	· (	) se
(	x) seed	mixture 2	(	) se
(	) seed	mixture 2/LPC	(	) A

( ) seed mixture 3( ) seed mixture 4

() Aplomado Falcon Mixture

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-ofway and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

18. <u>Escape Ramps</u> - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

- a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
- b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

#### STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the application (APD) and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 <u>et seq</u>. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, <u>et seq</u>. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, <u>et seq</u>.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
- b. Activities of other parties including, but not limited to:
  - (1) Land clearing.
  - (2) Earth-disturbing and earth-moving work.

(3) Blasting.

(4) Vandalism and sabotage.

#### c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-ofway width of 20 feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline must be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline must be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of <u>24</u> inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and othersimprovements on

public lands. The 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 braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

16. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, powerline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

17. Surface pipelines must be less than or equal to 4 inches and a working pressure below 125 psi.

### C. ELECTRIC LINES

# STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the approved application and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 <u>et seq</u>. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, <u>et seq</u>. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, <u>et seq</u>.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006. The

holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The 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 braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:

• For reclamation remove poles, lines, transformer, etc. and dispose of properly.

• Fill in any holes from the poles removed.

# IX. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

## X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

#### Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be <u>no</u> primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

Species		l <u>b/acre</u>
Sand dropseed (Sporobolus cryptandrus)		1.0
Sand love grass (Eragrostis trichodes)		1.0
Plains bristlegrass (Setaria macrostachya)	,	2.0

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed