Form 3160-3 (August 2007) Carlsba OC UNITED STATES	d Fin D Ar	ARTESIA DIST TESIA MAY 192	<b>RYATIC</b> FRICT 2016	ATS FORM OMB N Expires	-16-3 APPROVED 0. 1004-0137 July 31, 2010	77	2
DEPARTMENT OF THE I BUREAU OF LAND MAN	INTERIOR AGEMENT			5. Lease Serial No. NMNM116027			
APPLICATION FOR PERMIT TO	drill of		:D	6, If Indian, Allotee	or Tribe N	ıme	
la. Type of work: DRILL REENTE	ER	<u> </u>	<u> </u>	7. If Unit or CA Agn	eement, Nan	ie and	No.
Ib. Type of Well: I Oil Well Gas Well Other	□ Sii	ngle Zone 🔲 Multir	ole Zone	8. Lease Name and HH NO 30 P1 FED	Well No.		
2. Name of Operator CHEVRON USA INC				9. API Well No.	12-70	 al.	
3a. Address 1616 WEST BENDER BLVD HOBBS, NM 88240	3b. Phone No. 575-263-04	. (include area code) 431		10. Field and Pool, or WILDCAT; BONE	Exploratory SPRING	<u> </u>	
4. Location of Well (Report location clearly and in accordance with any	y State requirem	ents.*)		11. Sec., T. R. M. or I	Sik.and Surv	ey or A	rea
At surface 175' FNL & 375' FWL At proposed prod. zone 250' FNL & 400' FWL				SEC 31 T24S, R27 SEC 30 T24S, R27	7E, UL D ( 7E, UL D (	SHL) BHL)	
<ol> <li>Distance in miles and direction from nearest town or post office*</li> <li>From Malaga, Go S 11.2 mi Hwy 285. Turn W on CR724. C</li> </ol>	Go 10.8 mi V	W to CR742. Go 8 r	mi N	12. County or Parish EDDY		3. Stat NM	te
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of a 624.8	16. No. of acres in lease         17. Spacing           624.8         160 AC		ing Unit dedicated to this well CRES			
<ol> <li>Distance from proposed location* to nearest well, drilling, completed, 31 FED 1 - HNG OIL CO applied for, on this lease, ft.</li> </ol>	19. Proposed TVD 7358 MD 12368	d Depth	20. BLM/BIA Bond No. on file CA 0329				
<ol> <li>Elevations (Show whether DF, KDB, RT, GL, etc.)</li> <li>3397' GL</li> </ol>	22. Approxit 10/31/201	22. Approximate date work will start* 10/31/2015		23. Estimated duration 1 to 2 Months			
	24. Attac	chments					
The following, completed in accordance with the requirements of Onshor	e Oil and Gas	Order No.1, must be at	ttached to thi	s form:			
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> </ol>		4. Bond to cover the Item 20 above).	he operation	ns unless covered by an	existing bo	nd on i	file (s
<ol> <li>A Surface Use Plan (if the location is on National Forest System I SUPO must be filed with the appropriate Forest Service Office).</li> </ol>	Lands, the	<ol> <li>Operator certific</li> <li>Such other site BLM.</li> </ol>	ation specific info	ormation and/or plans a	s may be req	uired l	by the
25. Signature Cridy Horne-Minielo	Name CIND	Name (Printed Typed)DateCINDY HERRERA-MURILLO01/27/2015			)15		
PERMITTING SPECIALIST							
Approved by (Signature) James A. Amos	Name	(Printed/Typed)			Date	' 1	6 2
Title FIELD MANAGER	Office	CA	RLSBAD	FIELD OFFICE	<b>1</b>		
Application approval does not warrant or certify that the applicant holds conduct operations thereon. Conditions of approval, if any, are attached.	s legal or equi	table title to those righ	tstintlie sub 142 price i	APPROVAL	entitle the ap	plicant WO	ito YE
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a cr States any false, fictitious or fraudulent statements or representations as t	ime for any pe to any matter w	erson knowingly and vithin its jurisdiction.	willfully to m	ake to any department of STAL	or agency of	`the U	nited
(Continued on page 2)			7 • • •	*(Inst	tructions	on pa	ige 2
Isbad Controlled Water Basin		stia	SE Son CL F	end Managum Ceively	કાર્સ		

SEE ATTACHED FOR CONDITIONS OF APPROVAL

> B 5/24/16

shall

Approval Subject to General Requirements & Special Stipulations Attached

ilurel woop System

### 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 conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Executed this	27th day of Sanvary 2015
Name:	and h
Danny	800ne – Projěct Manager
Address:	1400 Smith Street
	Houston, TX 77002
	<u>Room 40135</u>
Office:	<u>713-372-5390</u>
E maile	DDDB@CUEVBON COM
C-111911;	

Well-Site Evaluation	Field Form
Operator: Chevron USA Inc	Fiscal Year: 2015 Onsite Type: Pre NOS
Well Name: Hay Hurst NO 30 P1 FED 2H	Pre-NOS Date:10/31/2014
SHL: S: 31, T.24S., R.27E., QTR/QTR: SHL: 175 FNL & 375 FWL	NOS Received Date:
BHL: S: 30, T.24S., R.27E., QTR/QTR: BHL: 250 FNL & 400 FWL	APD Received Date:
Project Lead: Bell, John	
Onsite Performed: <u>10/31/2014</u> Onsite Issues?: <u>Ves</u> No S	SME Contacted?
Well Type: 🗹 Oil 🗌 Gas 🗌 SWD 🛄 Other:	🗹 Horizontal 🗌 Vertical
Operator Representative: Tom Watkins	Contact Number:
BLM Onsite Representative:	· ·
Description of Topography (cut/fill):	
Soils: 🗹 Sandy 🗆 Loamy 🛑 Gypsum 🛑 Rocky	
Vegetation:	
Cave/Karst: 🗆 Critical 🗆 High 🗔 Medium 🗹 Low	
Hydrogeology (playas, floodplain, erosive soils, plant indicators): No I	ssue
Wildlife (LPC, SDL, Raptor Nest): LPC DSL Heronry	🗆 Aplomado Falcon
Range Improvements (fences, etc.):	
Pad Size: 395 x 330 V-door Direction:	East
Reserve Pit?: 🗆 Yes 🗹 No	
Topsoil Placement: 🗆 East 🖾 NE 🗌 North 🗌 NW	SE South SW West
Cut/Fill Diagram Required?: 🗹 Yes 🛛 🗆 No	
New access road needed?: 🗹 Yes 🛛 No -	
Where will the access road enter the well pad?:	Length of access road (ft): <u>1</u>
Will the access road be crown and ditched?: 🗹 Yes 🗌 No	· · · ·
How many turnouts needed?: How many cattleguard	ds needed?:
Will a ROW be needed?:         No         Will a culvert be needed	ed?:
Will a low water crossing be needed?: <u>No</u> Will any lead-off ditch	es be needed?:No
Other info about the new road?: No	
Two-track road need upgraded/reconstructed?: 🏾 Yes 🛛 🗹 No	· · · · · · · · · · · · · · · · · · ·
Will an existing road be used to access the well? (excludes county or st	ate roads): 🗆 Yes 🛛 🗹 No
Is a tank battery planned to be located on site?: $\Box$ Yes $oldsymbol{\mathbb{V}}$ I	No
Is a pipeline planned to be installed for this well?: $\checkmark$ Yes $\Box$ N What sides of the well pad will receive interim reclamation?: $\Box$ E $\checkmark$ N	No NE ☑ N☑ NW □ SE □ S □ SW □ W

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### Other relevant information:

3H SHL 175 FNL 400 FWL BHL SEC 30 250 FNL 400 FWL

Mitigation Measures/Stipulations:

Final Well Location: 🔲 Same as Proposed 📋 Different Location



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.

PROCESSING FEE INFORMATION CALLED INTO TAN YOUNGAT BLM, ON 01-27-15

CHEVRON USA INC HAS AN AGREEMENT WITH CEHMM TO PROVIDE THE NEPA INFORMATION TO BLM.

### PLEASE FIND THE FOLLOWING ATTACHMENTS:

APD FORM PRIVATE SURFACE OWNER AGREEMENT (IF APPLICABLE) C102 (EXHIBIT -1) SUPPORTING MAPS (EXHIBIT 2) MILE RADIUS MAP (EXHIBIT 3) DRILLING PLAN DIRECTIONAL PLAN AND PLOT **BOP SCHEMATIC** SUPPORTING BOP DOCUMENTS/TESTING CHOKE MANIFOLD SCHEMATIC **BOPE TESTING** RIG LAYOUT/FACILITY PAD (EXHIBIT 6) OTHER SCHEMATICS ENGINEER HAS REQUESTED IN PAST H2S PLAN INTERIM RECLAMATION PLAT (EXHIBIT 7) SURFACE USE PLAN SUPPORTING SUP MAPS WELLHEAD SCHEMATIC OIL AND GAS MEASUREMENT SCHEMATIC (EXHIBIT 4&5) **OPERATOR CERTIFICATION – SIGNED** 

ARCH SURVEY

ON SITE INSPECTION CONDUCTED ON \_\_\_\_\_BY \_\_\_\_JOHN BELL \_\_\_ WITH BLM.

<u>District 1</u> 1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 <u>District 11</u>

811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720 District III 1000 Rio Brazos Road, Aztec. NM 87410

Phone: (505) 334-6178 Fax: (505) 334-6170 District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462 State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

Exhibit 1

Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT									
30 95 43796 96415 USILOW Last Pool Name							RINGW		
<sup>4</sup> Proper	ty Code			5 P	roperty Name	4	<u> </u>		6 Well Number
3162	<u>147-</u>	-		HH N	NO 30 P1 FED	eral :			2H -
<sup>2</sup> OGR	ID No.			٥*	perstor Name		,		<sup>9</sup> Elevation
43;	23 .			CHEVE	RON U.S.A. IN	С.			3397'
				" Sur	face Locat	ion			
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West lin	e County
D	31	24 SOUTH	27 EAST, N.M.P.M.		175'	NORTH	375'	WEST	EDDY
			" Bottom H	lole Locat	ion If Diffe	erent From S	urface		
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Fect from the	East/West lin	e County
D	30	24 SOUTH	27 EAST, N.M.P.M.		250'	NORTH	400'	WEST	EDDY
12 Dedicated A	cres <sup>13</sup> Join	t or Infitl	<sup>14</sup> Consolidation Code <sup>15</sup>	Order No.			<u>.</u>		
1)60									

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.







ONSHORE ORDER NO. 1 Chevron Operating Inc. HH NO 30 P1 Fed 2H Eddy, NM

### 1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA	KBTVD	MD
Rustler	0	0	
Castile	3040	388	
Lamar	1250	2178	
Bell Canyon	1180	2248	
Cherry Canyon	425	3003	
Brushy Canyon	-650	4078	
Bone Spring Limestone	-2284	5712	
1st Bone Spring	-3200	6628	
2nd Bone Spring	-3424	6852	
Lateral TD (2nd Bone Spring)	(3,967)	7,395	12368

### 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	150
Water	Rustler	0
Water	Bell Canyon	2248
Water	Cherry Canyon	3003
Oil/Gas	Brushy Canyon	4078
Oil/Gas	Bone Spring Limestone	5712
Oil/Gas	1st Bone Spring	6628
Oil/Gas	2nd Bone Spring	6852

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.

ONSHORE ORDER NO. 1 Chevron Operating Inc. HH NO 30 P1 Fed 2H Eddy, NM

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### 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'	500'	17-1/2"	13-3/8"	48 #	H-40	STC	New
Intermediate	0' 214	2,300	12-1/4"	9-5/8"	40 #	HCK-55	LTC	New
Production	0'	12,368	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	16,500' MD/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	X
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 overpuli	X	X	X

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### 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'	300'	13.5	1.78	125	228	9.18
Tail	Class C+2%CaCl	300'	500'	14.8	1.35	125	290	6.39
Intermediate								
Lead	65C/35Poz +6%Gel +5%Salt	0'	1,700'	13.7	1.68	100	560	9.72
Tail	Class C	1,700'	2,300	14.8	1.33	100	311	6.24
Production			2160					
1st Lead	50% Class H+ 50% Silicalite +2% Gel	1,800'	6,818'	11.3	2.54	100	950	15.07
2nd Lood	Versacem	6,818'	11,330	13.2	1.81	35	860	8.10
	(Halliburton)							
Tail	Acid Soluble Cement	11,330'	12,368'	15	2.63	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. HH NO 30 P1 Fed 2H Eddy, NM

psi

### 6. MUD PROGRAM

	From	То	Туре	Weight	F. Vis	Filtrate
	0'	500'	Spud Mud	8.3 - 8.7	32 - 34	NC - NC
2160	500'	2,300	2160 Brine	9.5 - 10.1	28 - 29	NC - NC
	-2,300	6,818'	FW/Cut Brine	8.3 - 9.5	28 - 29	NC - NC
	6,818'	7,722'	Cut Brine	8.3 - 9.5	28 - 30	15 - 25
	7,722'	12,368'	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: 3429

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.

Eddy County, NM Hayhurst North Hayhurst North 30 P1 Fed 2H

Wellbore #1

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Plan: Plan #1

# Sperry Drilling Services Proposal Report

12 January, 2015

Well Coordinates: 429,313.00 N, 530,026.00 E (32° 10' 48.94" N, 104° 14' 10.62" W) Ground Level: 3,397.00 usft

Local Coordinate Origin: Viewing Datum: TVDs to System: North Reference: Unit System: Centered on Well Hayhurst North 30 P1 Fed 2H GL 3397.0' + KB 31.0' @ 3428.00usft (Ensign 767) N Grid API - US Survey Feet

Version: 5000.1 Build: 72

### HALLIBURTON

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### Plan Report for Hayhurst North 30 P1 Fed 2H - Plan #1

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
388.00 Castille	0.00	0.00	388.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,178.00 Lamar LS	0.00	0.00	2,178.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,248.00 Bell Canyo	0.00 on	0.00	2,248.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,003.00 Cherry Ca	0.00 <b>nyon</b>	0.00	3,003.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,078.00 Brushy Ca	0.00 nyon	0.00	4,078.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,712.00 T/Bone Sp	0.00 ring	0.00	5,712.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,628.00 T/1st Bone	0.00 Spring Sand	0.00	6,628.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,818.03 Start Build	0.00 <b>@ 6818.03' M</b>	0.00 ID - Dogleg =	6,818.03 10.00°/100'	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,852.01	3.40	0.10	6,851.99	1.01	0.00	1.01	10.00	10.00	0.00	0.10
B/1st Bone	e Spring Sand									
6,900.00	8.20	0.10	6,899.72	5.85	0.01	5.85	10.00	10.00	0.00	0.00
7,000.00	18.20	0.10	6,996.96	28.66	0.05	28.66	10.00	10.00	0.00	0.00
7,100.00	28.20	0.10	7,088.75	68.00	0.12	68.00	10.00	10.00	0.00	0.00
7,200.00	38.20	0.10	7,172.33	122.08	0.21	122.08	10.00	10.00	0.00	0.00
2nd Bone	Spring Sand	0.10	1,221.00	172.50	0.30	172.50	10.00	10.00	0.00	0.00
7,300.00	48.20	0.10	7,245.13	191.04	0.33	191.04	10.00	10.00	0.00	0.00
7,400.00	58.20	0.10	7,304.96	271.01	0.47	271.01	10.00	10.00	0.00	0.00
7,500.00	68.20	0.10	7,350.00	360.16	0.62	360.16	10.00	10.00	0.00	0.00
7,600.00	78.20	0.10	7,378.87	455.76	0.79	455.77	10.00	10.00	0.00	0.00
7,650.43 Havhurst N	83.24 Iorth 30 P1 Fe	0.10 ed 2H FTP	7,387.00	505.52	0.87	505.52	10.00	10.00	0.00	0.00
7 700 00			7 000 70		• • •		(0.00			
7,700.00	88.20	0.10	7,390.70	554.93	0.96	554.94	10.00	10.00	0.00	0.00
End Build	@ 7722.03' MI	D - Hold Angl	e @ 90.40° - '	Tat. Line	0.99	570.90	10.00	10.00	0.00	0.00
7,800.00	90.40	0.10	7.390.42	654.93	1.13	654.93	0.00	0.00	0.00	0.00
7,900.00	90.40	0.10	7,389.73	754.93	1.30	754.93	0.00	0.00	0.00	0.00
8,000.00	90.40	0.10	7,389.03	854.92	1.47	854.93	0.00	0.00	0.00	0.00
8,100.00	90.40	0.10	7,388.33	954.92	1.65	954.92	0.00	0.00	0.00	0.00
8,200.00	90.40	0.10	7,387.63	1,054.92	1.82	1,054.92	0.00	0.00	0.00	0.00
8,300.00	90.40	0.10	7,386.93	1,154.92	1.99	1,154.92	0.00	0.00	0.00	0.00
8,400.00	90.40	0.10	7,386.24	1,254.91	2.16	1,254.92	0.00	0.00	0.00	0.00
8,500.00	90.40	0.10	7,385.54	1,354.91	2.34	1,354.91	0.00	0.00	0.00	0.00
8,600.00	90.40	0.10	7,384.84	1,454.91	2.51	1,454.91	0.00	0.00	0.00	0.00
8,700.00	90.40	0.10	7,384.14	1,554.91	2.68	1,554.91	0.00	0.00	0.00	0.00
8,000.00	90.40	0.10	7,303.44	1,004.90	2.00	1,004.91	0.00	0.00	0.00	0.00
9,000.00	90.40	0.10	7,382.05	1,854.90	3.20	1,854.90	0.00	0.00	0.00	0.00
9 100 00	90.40	0.10	7 381 35	1 954 90	3 37	1 954 90	0.00	0.00	0.00	0.00
9,200,00	90.40	0.10	7.380.65	2.054.89	3.54	2.054.90	0.00	0.00	0.00	0.00
9,300.00	90.40	0.10	7,379.95	2,154.89	3.71	2,154.89	0.00	0.00	0.00	0.00
9,400.00	90.40	0.10	7,379.25	2,254.89	3.89	2,254.89	0.00	0.00	0.00	0.00
9,500.00	90.40	0.10	7,378.56	2,354.89	4.06	2,354.89	0.00	0.00	0.00	0.00
9,600.00	90.40	0.10	7,377.86	2,454.88	4.23	2,454.89	0.00	0.00	0.00	0.00
9,700.00	90.40	0.10	7,377.16	2,554.88	4.40	2,554.88	0.00	0.00	0.00	0.00
9,800.00	90.40	0.10	7,376.46	2,654.88	4.58	2,654.88	0.00	0.00	0.00	0.00
9,900.00	90.40	0.10	7,375.76	2,754.88	4.75	2,754.88	0.00	0.00	0.00	0.00
10,000.00	90.40	0.10	7,375.07	2,854.87	4.92	2,854.88	0.00	0.00	0.00	0.00

### HALLIBURTON

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Eddy County, NM

### Plan Report for Hayhurst North 30 P1 Fed 2H - Plan #1

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
10,100.00	90.40	0.10	7,374,37	2.954.87	5.09	2.954.87	0.00	0.00	0.00	0.00
10,200.00	90.40	0.10	7,373,67	3.054.87	5.26	3.054.87	0.00	0.00	0.00	0.00
10,300.00	90.40	0.10	7.372.97	3,154,86	5.44	3,154,87	0.00	0.00	0.00	0.00
10,400.00	90.40	0.10	7,372,27	3,254,86	5.61	3.254.87	0.00	0.00	0.00	0.00
10,500.00	90.40	0.10	7,371.58	3,354.86	5.78	3,354.86	0.00	0.00	0.00	0.00
10,600.00	90.40	0.10	7,370.88	3,454.86	5.95	3,454.86	0.00	0.00	0.00	0.00
10,700.00	90.40	0.10	7,370.18	3,554.85	6.13	3,554.86	0.00	0.00	0.00	0.00
10,800.00	90.40	0.10	7,369.48	3,654.85	6.30	3,654.86	0.00	0.00	0.00	0.00
10,900.00	90.40	0.10	7,368.78	3,754.85	6.47	3,754.86	0.00	0.00	0.00	0.00
11,000.00	90.40	0.10	7,368.08	3,854.85	6.64	3,854.85	0.00	0.00	0.00	0.00
11,100.00	90.40	0.10	7,367.39	3,954.84	6.82	3,954.85	0.00	0.00	0.00	0.00
11,200.00	90.40	0.10	7,366.69	4,054.84	6.99	4,054.85	0.00	0.00	0.00	0.00
11,300.00	90.40	0.10	7,365.99	4,154.84	7.16	4,154.85	0.00	0.00	0.00	0.00
11,400.00	90.40	0.10	7,365.29	4,254.84	7.33	4,254.84	0.00	0.00	0.00	0.00
11,500.00	90.40	0.10	7,364.59	4,354.83	7.51	4,354.84	0.00	0.00	0.00	0.00
11,600.00	90.40	0.10	7,363.90	4,454.83	7.68	4,454.84	0.00	0.00	0.00	0.00
11,700.00	90.40	0.10	7,363.20	4,554.83	7.85	4,554.84	0.00	0.00	0.00	0.00
11,800.00	90.40	0.10	7,362.50	4,654.83	8.02	4,654.83	0.00	0.00	0.00	0.00
11,900.00	90.40	0.10	7,361.80	4,754.82	8.19	4,754.83	0.00	0.00	0.00	0.00
12,000.00	90.40	0.10	7,361.10	4,854.82	8.37	4,854.83	0.00	0.00	0.00	0.00
12,100.00	90.40	0.10	7,360.41	4,954.82	8.54	4,954.83	0.00	0.00	0.00	0.00
12,200.00	90.40	0.10	7,359.71	5,054.82	8.71	5,054.82	0.00	0.00	0.00	0.00
12,287.49	90.40	0.10	7,359.10	5,142.30	8.86	5,142.31	0.00	0.00	0.00	0.00
Hayhurst I	North 30 P1 Fe	d 2H LTP								
12,300.00	90.40	0.10	7,359.01	5,154.81	8.88	5,154.82	0.00	0.00	0.00	0.00
12,367.19	90.40	0.10	7,358.54	5,222.00	9.00	5,222.01	0.00	0.00	0.00	0.00
TD @ 12367.19' MD - Hayhurst North 30 P1 Fed 2H BHL										

### Plan Annotations

Measured	Vertical	Local Cool	rdinates		
Depth (usft)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment	
6,818.03	6,818.03	0.00	0.00	Start Build @ 6818.03' MD	
6,818.03	6,818.03	0.00	0.00	Dogleg = 10.00°/100'	
7,722.03	7,390.97	576.96	0.99	End Build @ 7722.03' MD	
7,722.03	7,390.97	576.96	0.99	Hold Angle @ 90.40°	
12,367.19	7,358.54	5,222.00	9.00	TD @ 12367.19' MD	
6,818.03 6,818.03 7,722.03 7,722.03 12,367.19	6,818.03 6,818.03 7,390.97 7,390.97 7,358.54	0.00 0.00 576.96 576.96 5,222.00	0.00 0.00 0.99 0.99 9.00	Start Build @ 6818.03' MD Dogleg = 10.00°/100' End Build @ 7722.03' MD Hold Angle @ 90.40° TD @ 12367.19' MD	

### Vertical Section Information

	Angle			Origin	Orig	jin	Start
	Туре	Target	Azimuth (°)	Турө	+N/_S (usft)	+E/-W (usft)	TVD (usft)
TD		No Target (Freehand)	0.10	Slot	0.00	0.00	0.00
Survey tool pr	<u>ogram</u>						
From (usft)	To (usft)		Survey/Plan			Surve	ay Tool
0.00	12,367.19	Plan #1				MWD+SC	

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### HALLIBURTON

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### Plan Report for Hayhurst North 30 P1 Fed 2H - Plan #1

### Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
388.00	388.00	Castille		-0.40	0.10
2,178.00	2,178.00	Lamar LS		-0.40	0.10
2,248.00	2,248.00	Bell Canyon		-0.40	0.10
3,003.00	3,003.00	Cherry Canyon		-0.40	0.10
4,078.00	4,078.00	Brushy Canyon		-0.40	0.10
5,712.00	5,712.00	T/Bone Spring		-0.40	0.10
6,628.00	6,628.00	T/1st Bone Spring Sand		-0.40	0.10
6,852.01	6,852.00	3/1st Bone Spring Sand		-0.40	0.10
7,274.61	7,229.00	2nd Bone Spring Sand		-0.40	0.10
7,722.03	7,395.00	Tgt. Line		-0.40	0.10

### Targets associated with this wellbore

	TVD	+N/-S	+E/-W	
Target Name	(usft)	(usft)	(usft)	Shape
Hayhurst North 30 P1 Fed 2H FTP	7,391.47	504.99	0.07	Point
Hayhurst North 30 P1 Fed 2H BHL	7,358.54	5,222.00	9.00	Rectangle
Hayhurst North 30 P1, Fed 2H LTP	7,359.10	5,142.30	8.78	Point
<u> </u>				

### HALLIBURTON

# North Reference Sheet for Hayhurst North - Hayhurst North 30 P1 Fed 2H - Wellbore #1

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference. Vertical Depths are relative to GL 3397.0' + KB 31.0' @ 3428.00usft (Ensign 767). Northing and Easting are relative to Hayhurst North 30 P1 Fed 2H Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 3001 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866

Projection method is Transverse Mercator (Gauss-Kruger) Central Meridian is -104.33°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:0° 0' 0.000 N° False Easting: 500,000.00usft, False Northing: 0.00usft, Scale Reduction: 0.99991012

Grid Coordinates of Well: 429,313.00 usft N, 530,026.00 usft E Geographical Coordinates of Well: 32° 10' 48.94" N, 104° 14' 10.62" W Grid Convergence at Surface is: 0.05°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,367.19usft the Bottom Hole Displacement is 5,222.01usft in the Direction of 0.10° (Grid).

Magnetic Convergence at surface is: -7.57° (12 January 2015, , BGGM2014)





August 7, 2013

Customer: Odessa

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

Pick Ticket #: 212332

H<u>ose Assembly Serial #</u> 212332 **Coupling Method** Swage Einal.O.D. 5.31" <u>Verification</u> Type of Fitting 4 1/16 10K Die Size 5.25" Hose Serial # 8104 Standard Safecy Multiplier Applies **Burst Pressure** Length 25' <u>0.D.</u> 4.77' **Hose Specifications** . Working Pressure 7500 PSI Hose Type 



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

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Approved By: Ryan Adoms

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### CHOKE MANIFOLD SCHEMATIC



ections : Intermediate and Production Hole Sections

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peuu II	valve (if used), close a cceptable procharge This test will be perfo	-controtted choke line r i above the maximum a of the closing pumps. if the well	en the hydraulically an the hydraulically as the use the use an the use the and a	o of yticapacity to op proventer, and rotain a on the closing manil and and tept on locatio	Accumulator will have s name, close the annular pressure (see table abov with test pressure recon	
	iaq 008	isq 0011	izq 0001	3000 psi	3000 psi	
	isq 006	isq 0011	isq 0001	1aq 0005	iaq 000\$	
	1ad 007	isq 008	isq O27	150 0051	1500 pst	
	eldergesse muminiki enusserg epicitoerg	eldatgesse mumizaM enusserge presente	Desired precharge pressure	eluctecto muminim enucceptante	Recumulator working and point of the second	2 2400 2 2400
noite noite	Precharge pressure for each accumulator bottle must tail 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. Check (Accumulator working   Minimum acceptable   Desired precharge   Maximum acceptable Minimum acceptable					
I	r well prior to lowhigh same well.	ed off at least once pe d after 6 months on the	, verified, and checl his must be repeate	em must be performed g of BOP equipment. T	i gniwollot afT initset etusserq	
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### 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**

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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.

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	Name	Title	Office Number	Cell Phone
1.	Serik Seitassanov	Drilling Engineer	(713) 372-0453	(832) 581-8145
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.	Spencer Halliday	D&C HES	(713) 372-5720	(281) 386-5781



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









# Legend H2S Monitor

# Flag

45 Minute Escape Packs 2 at Briefing Area 2 at Alternate Briefing

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



### - HH NO 30 P1 Fed 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.
- 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;
- 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  $H_2S$  training courses will be instructed by personnel who have successfully completed an appropriate  $H_2S$  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<sub>2</sub>S training certification card (or certificate) upon successful completion of the appropriate H<sub>2</sub>S training course. Personnel working in an H<sub>2</sub>S environment will carry a current H<sub>2</sub>S training certification card as proof of having received the proper training on their person at all times.

### **Briefing Area**

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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

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### **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.





### **Existing Roads** (Exhibit 1)

• The operator will improve or maintain existing roads in a condition the same as or better than before operations begin. The operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures on the entire access route such as cattle guards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use. We will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or wind events. BLM written approval will be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.

### New or Reconstructed Access Roads – Survey plat (Exhibit 2)

- Road Width: The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed 14'. The maximum width of surface disturbance shall not exceed 25'.
- Maximum Grade: 3%
- Crown Design: Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2%. The road shall conform to cross section and plans for typical road construction found in the BLM Gold Book.
- Turnouts: 50-60'
- Ditch Design: Ditching will be constructed on both sides of road.
- Cattle guards: 1 Existing and 1 possible new CG needed per Jennifer Van Curen
- Major Cuts and Fills: 2:1 during drilling and completions. Cuts and fills taken back to 3:1 at interim.
- Type of Surfacing Material: Caliche

### Location of Existing Wells (Exhibit 3)

• 1-Mile radius map is attached

### Location of Existing and/or Proposed Production Facilities (Exhibit 4)

- Facilities: Production facilities will be in the northeast corner of NENE sec.31, T24S, R27E where oil sales will take place.
  - o The facility is off lease.
  - 3<sup>rd</sup> party gas purchaser has agreed to pipeline to Chevron's production facilities and will be responsible for ROW approval.
  - o Open top tanks or open containments will be netted.
  - Open vent exhaust stacks will be modified to prevent birds or bats from entering, discourage perching, roosting, and nesting.

- Facilities will have a secondary containment 1.5 times the holding capacity of largest storage tank.
- All above ground structures will be painted non-reflective shale green for blending with surrounding environment.
- 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.
- Pipelines: Two 4" surface flex pipelines with less than 125 psi working pressure will be laid along existing disturbances from well to production facility. A ROW will not be required.
  - All construction activity will be confined to the approved 20' width.
  - Pipeline will run perpendicular to road and will stay within 10' of road.
  - State boring permit will be applied for and approved prior to any road boring activity begins.
- Power lines: The permanent electrical supply route will be determined prior to construction of permanent distribution lines. A generator will be utilized until permanent power is connected.
  - Construction activity will not commence until Power line access is approved or ROW is approved.

### Location and Types of Water Supply (Exhibit 5)—(if new pond-need survey platexhibit 2)

• From HH 16

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### **Construction Material**

- Caliche will be used to construct well pad and roads. Material will be purchased from the nearest federal, state, or private permitted pit.
- The proposed source of construction material will be located and purchased by construction contractor.
  - Payment shall be made by contractor prior to any removal of federal minerals material by contacting agent at (575) 234-5972.
  - Notification shall be given to BLM at (575) 234-5909 at least 3 working days prior to commencing construction of access road and/or well pad.

### Methods for Handling Waste

- Drilling fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility.
- Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around the well site will be collected for disposal.

- Human waste and grey water will be properly contained and disposed of properly at a state approved disposal facility.
- After drilling and completion operations, trash, chemicals, salts, frac sand and other waste material will be removed and disposed of properly at a state approved disposal facility.
- The well will be drilled utilizing a closed loop system. Drill cutting will be properly disposed of into steel tanks and taken to an NMOCD approved disposal facility.

### **Ancillary Facilities**

• Ancillary Facilities will not be required for this proposed project.

### Well Site Layout (Exhibit 6)

- Surveyor Plat
  - Exterior well pad dimensions are 395' x 330'
  - Interior well pad dimensions from point of entry (well head) are 150' north, 180' south, 185' west, and 210' east
  - o Total disturbance area needed for construction activities will be 3.12 acres
  - Topsoil placement: West and North
  - Cut and fill: West side of pad
- Rig Layout (Exhibit 6)

### **Plans for Surface Reclamation**

### **Reclamation Objectives**

- The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; control erosion; and minimize habitat and forage loss, visual impact, and weed infestation, during the life of the well or facilities.
- The long-term objective of final reclamation is to return the land to a condition similar to what existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats. To ensure that the long-term objective will be reached through human and natural processes, actions will be taken to ensure standards are met for site stability, visual quality, hydrological functioning, and vegetative productivity.
- The BLM will be notified at least 3 days prior to commencement of any reclamation procedures.
- If circumstances allow, interim reclamation and/or final reclamation actions will be completed no later than 6 months from when the final well on the location has been completed or plugged. We will gain written permission from the BLM if more time is needed.
- Reclamation will be performed by using the following procedures:

### Interim Reclamation Procedures

- 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 225 x 200 feet.
- Within 30 days of well completion, the well location and surrounding areas will be cleared of, and maintained free of, all materials, trash, and equipment not required for production. A plan will be submitted showing where interim reclamation will be completed in order to allow for safe operations, protection of the environment outside of drilled well, and following best management practices found in the BLM "Gold Book".
- In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.
- The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.
- Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts & fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used.
- Proper erosion control methods will be used on the area to control erosion, runoff and siltation of the surrounding area.
- The interim reclamation will be monitored periodically to ensure that vegetation has reestablished

### Final Reclamation (well pad, buried pipelines, and power lines, etc.)

- Prior to final reclamation procedures, the well pad, road, and surrounding area will be cleared of material, trash, and equipment.
- All surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.
- All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends in distinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.
- After all the disturbed areas have been properly prepared; the areas will be seeded with the proper BLM seed mixture, free of noxious weeds.
- Proper erosion control methods will be used on the entire area to control erosion, runoff and siltation of the surrounding area.

### Surface Ownership

- If on private surface, supply:
  - o Name: N/A (BLM)
  - o Address

- o Phone Number
- The operator must certify that they have provided a copy of the Surface Use Plan of Operations of the APD to the private surface owner or that they made a good faith effort if unable to provide the document to the surface owner.

### **Other Information**

- On-site performed by BLM NRS: John Bell
- Cultural report attached: <u>Yes</u> Participating Agreement attached: N/A
- Erosion / Drainage: Drainage control system shall be constructed on the entire length of road by the use of any of the following: ditches, side hill out-sloping and in-sloping, lead-off ditches, culvert installation, or low water crossings.
- Exclosure fencing will be installed around open cellar to prevent livestock or large wildlife from being trapped after installation. Fencing will remain in place while no activity is present and until backfilling takes place.
- Terrain: Downhill grade to the N-NW at under 2%
- Soil: Light brown sandy-silt containing caliche gravel and small cobbles
- Vegetation: Vegetation present in surrounding area includes creosote, acacia, pencil cholla, prickly pear cati, shrubs, and grass.
- Wildlife: No wildlife observed, but it is likely that deer, rabbits, coyotes, and rodents pass through the area.
- Surface Water: There are no ponds, lakes, streams, or rivers within several miles of proposed location
- Cave Karst: None known
- Watershed Protection: The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminates from leaving the well pad.
- Water wells: No known water wells within the 1- mile radius.
- Residences and Buildings: No dwellings within the immediate vicinity of the proposed location.
- Well Signs: Well signs will be in compliance per federal and state requirements and specifications.

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**Chevron Representatives** Primary point of contact: Jennifer Van Curen Jennifer.VanCuren@arcadis-us.com M- 432-270-8753

# Chevron Functional Contacts

Project Manager Name: Danny Boone	<b>Drilling Engineer</b> Name: Serik
Address: 1400 Smith Street Houston, TX 77002	Address: 1400 Smith Street Houston, TX 77002
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Surface Land Representative Name: Kevin Dickerson	Facility Lead Name: Christopher Smith
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Phone: (432) 687-7104	Phone: (432) 687-7249
Email: <u>Kevin.Dickerson@chevron.com</u>	Email: <u>Christopher.smith@chevron.com</u>
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### EXHIBITS:

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- Exhibit 1 -- Existing Roads
- Exhibit 2 -- Survey Plat: New or Reconstructed Roads Map: if road is outside 600' x 600'.
- Exhibit 3 -- 1-mile Radius Map
- Exhibit 4 -- Location of Existing and/or Proposed Production Facilities (Tank Battery)

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- Exhibit 5 -- Survey Plat: Infrastructure: roads, pipelines, power lines, frac pond
- Exhibit 6 -- Rig Layout: Well Site Layout Map / Diagram







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			
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### PECOS DISTRICT CONDITIONS OF APPROVAL

	OPERATOR'S NAME:	Chevron USA, Inc
	LEASE NO.:	NMNM116027
	WELL NAME & NO.:	HH NO 30 P1 Fed 2H
ĺ	SURFACE HOLE FOOTAGE:	175'/N & 375'/W
	BOTTOM HOLE FOOTAGE	250'/N & 400'/W Sec. 30
	LOCATION:	Section 31, T.24 S., R.27 E., NMPM
	COUNTY:	Eddy County, New Mexico

### 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.

**General Provisions Permit Expiration** Archaeology, Paleontology, and Historical Sites Noxious Weeds Special Requirements Avian protection Cave/Karst **Construction** Notification Topsoil Closed Loop System Federal Mineral Material Pits Well Pads Roads **Road Section Diagram** 🛛 Drilling High Cave/Karst **Cement Requirements** Logging Requirements Waste Material and Fluids **Production (Post Drilling)** Well Structures & Facilities **Pipelines Electric Lines Interim Reclamation Final Abandonment & Reclamation** 

### 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)

### **Avian Protection**

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 power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. The holder without liability or expense shall make such modifications and/or additions to the United States.

### **Cave/Karst Surface Mitigation**

The following stipulations will be applied to minimize impacts during construction, drilling and production.

### **Construction:**

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

### No Blasting:

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

### **Pad Berming:**

The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing
- . the berm cannot be lower than the berm height.)

### Tank Battery Liners and Berms:

Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain  $1\frac{1}{2}$  times the content of the largest tank.

### Leak Detection System:

A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

### Automatic Shut-off Systems:

Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

### Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

### **Rotary Drilling with Fresh Water:**

Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

### **Directional Drilling:**

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

### Lost Circulation:

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cavebearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

### Abandonment Cementing:

Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

### **Pressure Testing:**

Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

### Powerlines:

Smaller powerlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems. Larger powerlines will adjust their pole spacing to avoid cave and karst features. The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction and no further construction will be done until clearance has been issued by the Authorized Officer. Special restoration stipulations or realignment may be required.

### 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: 400' + 100' = 200' lead-off ditch interval 4%

### Cattleguards

An appropriately sized cattleguard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattleguards on the access road 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 cattleguards that are in place and are utilized during lease operations.

### Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

### **Public Access**

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

### **Construction Steps**

1. Salvage topsoil 2. Construct road 3. Redistribute topsoil 4. Revegetate slopes





### 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.
- 2. 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 Rustler top and 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) for Water Basin:

After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least <u>8 hours</u>. WOC time will be recorded in the driller's log. 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.

Possibility of water flows in the Salado and Castile. Possibility of lost circulation in the Delaware.

<u>A MINIMUM OF TWO CASING STRINGS CEMENTED TO SURFACE IS</u> <u>REQUIRED IN HIGH CAVE/KARST AREAS.</u> THE CEMENT MUST BE IN A SOLID SHEATH. THEREFORE, ONE INCH OPERATIONS ARE NOT SUFFICIENT TO PROTECT CAVE KARST RESOURCES. A CASING DESIGN THAT HAS A ONE INCH JOB PERFORMED DOES NOT COUNT AS A SOLID SHEATH. ON A THREE STRING DESIGN; IF THE PRIMARY CEMENT JOB ON THE SURFACE CASING DOES NOT CIRCULATE, THEN THE NEXT TWO CASING STRINGS MUST BE CEMENTED TO SURFACE.

- 1. The 13-3/8 inch surface casing shall be set at approximately 500 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 **9-5/8** inch surface casing shall be set at approximately **2160** feet. The minimum required fill of cement behind the 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.

- 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.
  - 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. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - 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.

### TMAK 041516

### 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 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**

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES A copy of the Grant and attachments, including stipulations, survey plat(s) and/or map(s), shall be on location during construction. BLM personnel may request to review 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. 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. Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC § 2601 *et seq.* (1982) with regard 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 in particular, 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. 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, *et seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq.*) 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 provision applies without regard to whether a release is caused by Holder, its agent, or unrelated third parties.

4. Holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. 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 Holder including, but not limited to: construction, operation, maintenance, and termination of the facility;

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- 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 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/she 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 Holder. Such action by the Authorized Officer shall not relieve Holder of any responsibility as provided herein.

6. All construction and maintenance activity shall be confined to the authorized right-of-way width of 20 feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline shall 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 shall be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity shall be confined to existing roads or right-of-ways.

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

8. 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 shall be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of 24 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 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.

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 shall 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 grant 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.

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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 1 for Loamy Sites

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 no primary or secondary noxious weeds in the seed mixture. Seed shall 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 shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed shall be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre shall be doubled. The seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may 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:

<u>b/acre</u>
).5
0.1
5.0
2.0

\*Pounds of pure live seed:

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

### NMOCD CONDITION OF APPROVAL

The *Newl* Gas Capture Plan (GCP) notice is posted on the NMOCD website under Announcements. The Plan became effective May 1, 2016. A copy of the GCP form is included with the NOTICE and is also in our FORMS section under Unnumbered Forms. Please review filing dates for all applicable activities currently approved or pending and submit accordingly. Failure to file a GCP may jeopardize the operator's ability to obtain C-129 approval to flare gas after the initial 60-day completion period.

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