

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2014

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NM 98122

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE – Other instructions on page 2.

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other Surface equipment

2. Name of Operator
Chevron

3a. Address
15 Smith Rd
Midland TX 79705

3b. Phone No. (include area code)

432-681-1315

10. Field and Pool or Exploratory Area
Fren Field

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Section 22, township 17 south, range 31 east, N.M.P.M.

11. County or Parish, State
Eddy County, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input checked="" type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Please forward this Sundry request to Mr. Tanner Nygren.

Chevron proposes extending a portion of the western edge of the existing pad at the 940 battery. The new pad will be the same elevation as the existing pad. The extended portion of pad will provide space for two new produced water tanks (one skim tank, one overflow tank) to replace the existing produced water storage tanks. The extension has an approximate foot print of 0.15 acres, and is approximately 48 ft by 140 ft. The new tanks are 30 ft in diameter and 24 ft high with a nominal capacity of 3000 barrels. The new tanks are closed top and will be integrated in to the existing gas blanket system. Chevron also proposes a new pad for installation of a larger emergency flare. The new pad is approximately 60 ft x 60 ft with a foot print of 0.08 acres. The new flare is 85 ft high designed for a relief capacity of 9 MMscfd. The existing flare pad will be reclaimed once the new flare is in service. Construction will commence upon approval of this notice.

Attachments:

- 01: Survey plats
- 02: Plot of existing equipment
- 03: Preliminary 3000 bbl tank drawing
- 04: Flare spec sheet
- 05: Imagery of proposed changes
- 06: Detailed justification for sundry request
- 07: Final site plan

QUESTIONS: Roger Spotts - Chevron
432-687-7627

Accepted for record

NMOCD

ser

3/13/2013

RECEIVED

MAR 13 2013

NMOCD ARTESIA

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Denise Pinkerton

Title

Regulatory Specialist

Signature

Denise Pinkerton

Date

02-08-2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

/s/ Don Peterson

FIELD MANAGER

Title

Date

MAR 11 2013

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

SECTION 22, TOWNSHIP 17 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY NEW MEXICO

16 1/2" SFL. ROD
15.

N89°26'42"E 2639.3'

1/4 COR.
GLO "1916" B.C.

DESCRIPTION FLARE STACK TRACT:

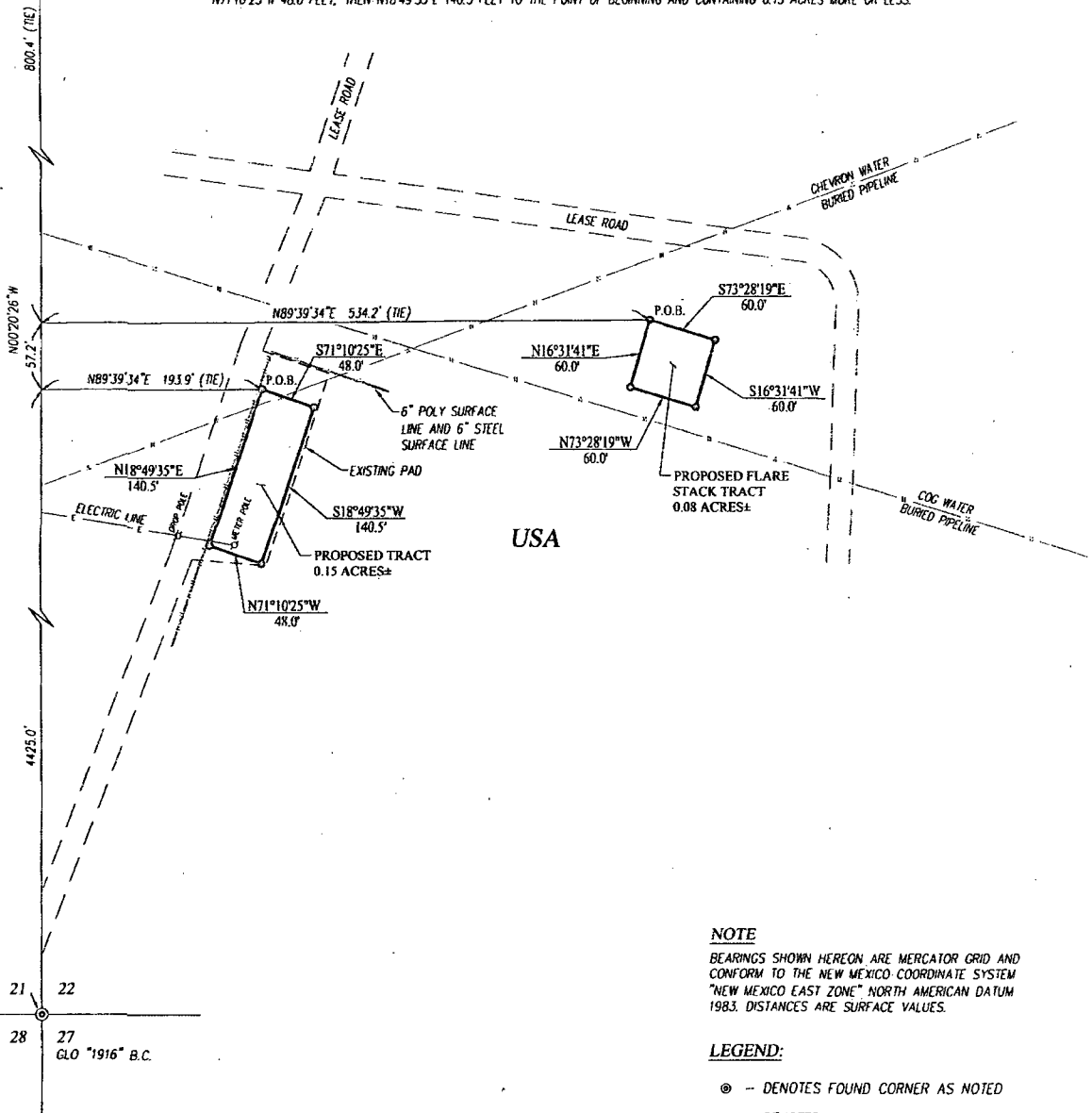
A PROPOSED FLARE STACK TRACT SITUATED IN THE NORTHWEST QUARTER OF SECTION 22, TOWNSHIP 17 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF THE PROPOSED FLARE STACK TRACT, WHICH LIES S00°20'26"E 800.4 FEET AND N89°39'34"E 534.2 FEET FROM THE NORTHWEST CORNER OF SAID SECTION 22; THEN S73°28'19"E 60.0 FEET; THEN S16°31'41"W 60.0 FEET; THEN N73°28'19"W 60.0; THEN N16°31'41"E 60.0 FEET; TO THE POINT OF BEGINNING AND CONTAINING 0.08 ACRES MORE OR LESS.

DESCRIPTION TRACT OF LAND:

A PROPOSED TRACT SITUATED IN THE NORTHWEST QUARTER OF SECTION 22, TOWNSHIP 17 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF THE PROPOSED TRACT, WHICH LIES S00°20'26"E 857.6 FEET AND N89°39'34"E 193.9 FEET FROM THE NORTHWEST CORNER OF SAID SECTION 22; THEN S71°10'25"E 48.0 FEET; THEN S18°49'35"W 140.5 FEET; THEN N71°10'25"W 48.0 FEET; THEN N18°49'35"E 140.5 FEET TO THE POINT OF BEGINNING AND CONTAINING 0.15 ACRES MORE OR LESS.



NOTE

BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

LEGEND:

- ⊙ -- DENOTES FOUND CORNER AS NOTED
- ⊗ -- DENOTES CALCULATED CORNER

100 0 100 200 Feet
Scale: 1"=100'

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 3239, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

RONALD J. EIDSON
DATE: 06/26/2012

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz

CHEVRON USA INC.

SURVEY OF TWO TRACTS OF LAND AT THE
SKELLY UNIT 940 TANK BATTERY
SITUATED IN NW/4 OF SECTION 22,
TOWNSHIP 17 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, NEW MEXICO

Survey Date: 6/13/12 CAD Date: 6/26/12 Drawn By: DSS
W.O. No.: 12111099 Rev: 12/10/12 Rel. W.O.: 12110328 Sheet 1 of 1

ACCESSORY LIST									
NO. REQ'D	REF.	DWG NO.	PG. MK.	DESCRIPTION	NOZZLE SCH/THK	FLANGE RATING	ELEVATION	PROJECTION	
2	N1	5A	2A-A	24" CLEANOUT/MANWAY N/A" DRAWN	1/4"X0.05	(NUT/100 RFSO)	SEE DWG	SEE DWG	
1	N2	6A	2A-A	6" PUMP SUCTION	X5	150# RFSO	1'-0 1/8"	8"	
1	N3	6B	2A-A	4" ANODE	X5	150# RFSO	10 1/4"	7"	
1	N4	6C	2A-A	4" INLET (DRAN IN)	X5	150# RFSO	6"	7"	
1	N5	6D	2A-A	3" DP LEVEL GAUGE	X5	150# RFSO	6"	7"	
1	N6	7A	2A-A	72" WWT	3/16		ROOF	SEE DWG	
1	N7	7C	2A-A	1/4" GUIDE WIRE RADAR	STD	150# RFSO	ROOF	4"	
1	N8	7D	2A-A	2" INLET	STD	150# RFSO	ROOF	6"	
1	N9	7E	2A-A	24" INLET 12" Inlet	STD	150# RFSO	200'-1 0"	1'-0"	
4	GL	3A	3A-B	GROUNDING LUG	-	-	SEE DWG	-	
1	NP	13A	13A-A	NAVELATE	-	-	SEE DWG	-	
1	BU	2E	2E-A	130"	-	-	SEE DWG	-	
1	CL	7E	7E-A	CHITILE	-	-	SEE DWG	-	
3	CS	13A	13A-A	CONDUIT SUPPORT BRACKET	-	-	SEE DWG	-	

GENERAL DESCRIPTION

OWNER: CHEVRON
LOCATION: RANGELY, CO
TANK QUANTITY: 1
TANK SIZE: 40' X 24'
TANK TYPE: SELF SUPPORTED CONE TANK NAME: EMERGENCY OVERFLOW
TANK NUMBER(S): -
TANK CAPACITY: 22584 GALLONS
PRODUCT STORED: OIL & WATER
FOUNDATION TYPE: CONCRETE W/RETAINING RING
OTHER TANK NOTES: -

MATERIALS

BOTTOM: A36/400 JOINT TYPE: LAP WELD
SHELL: A36/400 JOINT TYPE: BUTT WELD
ROOF: A36/400 JOINT TYPE: BUTT WELD
NOZZLE NECKS: A36/400 GASKETS: HUNGERS 4300
FLANGES: A105 BOLTS/NUTS: A193-B7/A194-2H
STRUCTURAL: - ANCHOR BOLTS: -
CORROSION ALLOWANCE
BOTTOM: 1/16" SHELL: 1/16" ROOF: 6"
NOZZLE NECKS: 0" STRUCTURAL: 6"

DESIGN CRITERIA

DESIGNED AND FABRICATED PER: API-650, 11TH EDITION, ADDENDUM 3 APPENDIX: A & E
SEISMIC OVERTURNING MOMENT: 48332 FT-LBS SEISMIC SHEAR: 4818 LBS
WIND DESIGN PER: API-650, 11TH EDITION, ADDENDUM 3 EXPOSURE: C VELOCITY: 100 MPH
WIND OVERTURNING MOMENT: 705411 FT-LBS WIND SHEAR: 13458 LBS
SPECIFIC GRAVITY: 1.00 FREEBOARD: 0 FT UNIFORM LIVE LOAD: 25 PSF ROOF SNOW LOAD: 28.4 PSF
DESIGN PRESSURE (INT.): -0.06 OPERATING PRESSURE (INT.): ATM DESIGN TEMPERATURE (MAX): 120F (MIN.): -20F
DESIGN PRESSURE (EXT.): -0.06 OPERATING PRESSURE (EXT.): ATM
TEST PRESSURE (INT.): 3.07/SG: 15.1
TEST PRESSURE (EXT.): 0.5 oz/sq. in. TESTING INFORMATION
HYDRO TEST: YES PER CODE -BY OTHERS TEST PRESSURE: ATM
RADIOGRAPHY: YES, SPOT PER APPENDIX A-BY OTHERS VACUUM TEST ALL BOTTOM WELDS: YES PER CODE
PRESSURE TEST RE-PAID: YES @ 2PSIG OTHER TESTING NOTES: TEST SHELL TO BOTTOM JOINT PER API-650, SEC. 7.2.4.1

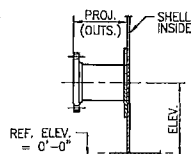
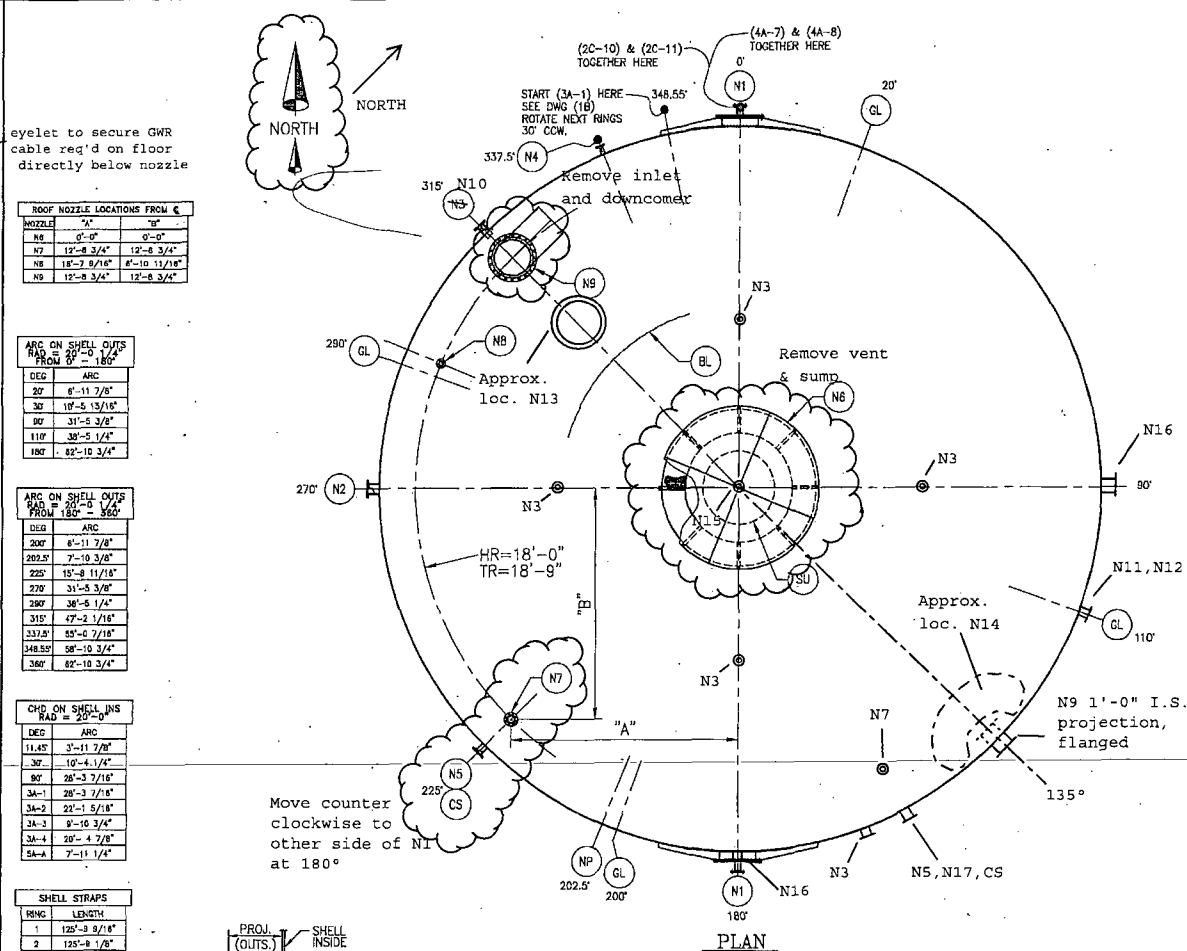
COATING INFORMATION

SHOP: PRIME EXTERIOR
FIELD: FULL INTERIOR AND TOUCH-UP/TOPT COAT EXTERIOR
INTERIOR: FULL FIELD
SURFACE PREP: SSPC-SP13
TOP COAT: SHERWIN WILLIAMS NEW-PLATE LHS COLOR: LIGHT GRAY DFT: 20 MILS
EXTERIOR: SHOP/FIELD
SURFACE PREP: SSPC-SP13
PRIME COAT: SHERWIN WILLIAMS MACROPOXY #46 COLOR: WHITE DFT: 5-7 MILS
TOP COAT: SHERWIN WILLIAMS 865/860/30 H-SOLIDS URETHANE COLOR: BLUE GRAY DFT: 3-4 MILS
Shale Green

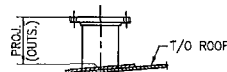
NOZZLE Sch Cont					
# Req'd	Ref.	Description	Nozzle Sch	Flange Rating	Elev. Proj
1	N10	12" Outlet	STD	150# RFSO	1'-0" 8"
1	N11	4" Water Leg	STD	150# RFSO	1'-0" 8"
1	N12	4" Oil Out	STD	150# RFSO	23'-0" 8"
1	N13	Emergency Vent (per API 12D)	-	-	Roof -
1	N14	Theft Hatch (per API 12D)	-	-	Roof -
1	N15	4" Gas Blanket	STD	150# RFSO	Roof 8"
2	N16	8" Overflow	STD	150# RFSO	23'-2" 8"
1	N17	3" DP Level Gauge	STD	150# RFSO	23'-6" 8"
1	N18	Anode	STD	150# RFSO	6" 8"

Notes:

- Bolts/nuts exposed to fluid shall be stainless steel (ex: piece mark 5A-12, dwg 5A, on the 24" manways will need to be SS)
- Is there a way to redesign the backing bar on the 24" manway that hold the bolts between the upper and lower manway sections (piece mark 5A-9, dwg 5B, detail 1)? The bolts do not seem to be removable which would make coating difficult. And it appears that when the nuts are torqued the bolt heads could chip the coating
- Include clips to mount a tangential walkway over N9
- Roof must be gas tight
- Venting designed per API 12D section 6
- Most placements, elevations, and projections are negotiable



TYP. SHELL NOZZLE



TYP. ROOF NOZZLE

ROOF NOZZLE LOCATIONS FROM 6			
NOZZLE	7"	10"	12"
N6	0'-0"	0'-0"	0'-0"
N7	12'-8 3/4"	12'-8 3/4"	12'-8 3/4"
N8	18'-7 9/16"	18'-10 11/16"	18'-10 11/16"
N9	12'-8 3/4"	12'-8 3/4"	12'-8 3/4"

ARC ON SHELL OUTS	
DEG	ARC
20	6'-11 7/8"
30	10'-5 13/16"
60	31'-5 3/8"
110	38'-5 1/4"
180	82'-10 3/4"

ARC ON SHELL OUTS	
DEG	ARC
20	6'-11 7/8"
30	10'-5 13/16"
60	31'-5 3/8"
110	38'-5 1/4"
180	82'-10 3/4"

CHD ON SHELL INS	
DEG	ARC
11.45	3'-11 7/8"
30	10'-4 1/4"
60	28'-3 7/16"
90	22'-3 7/16"
120	22'-3 7/16"
150	22'-3 7/16"
180	22'-3 7/16"

SHELL STRAPS	
RING	LENGTH
1	125'-9 9/16"
2	125'-9 9/16"
3	125'-9 9/16"

RMF ROCKY MOUNTAIN FABRICATION	1125 WEST 2300 NORTH P.O. BOX 16409 SALT LAKE CITY, UT 84116 PHONE: 801-586-2400 FAX: 801-322-2702	PROPRIETARY This page not to be used or duplicated without prior written consent of RMF	
TANK DATA SHEET CHEVRON USA INC 40'-0" X 24'-0" CONE ROOF TANK RANGELY, CO RANGELY COLLECTION STATION NO 5			
By: RS	Chk'd: MWG	Eng: MWG	Weight: 12134101
Date: 8/16/10	Date: 8/25/10	Date: 8/25/10	Dwg: 1A Rev: 0
0 DWJ WEM 2/15/12 RELEASED FOR FABRICATION Rev By App'd Date Description		Contract 12134101 Dwg 1A Rev 0	

Contract 12134101 1A
FABRICATION DWG

3000 bbl Tank Additions

The 940 battery in the Skelly unit currently treats and re-injects approximately 13000 barrels of water per day. Residual oil is skimmed for sales in a 1500 barrel skim tank (which has experienced two leaks this year). Chevron facilities typically target a quality of 50 ppm oil or less in the water before disposing of the water into injection wells. Due to continued drilling of new wells the existing tankage is no longer adequate. The existing skim tank, with current flow rates, yields water with >200 ppm oil. This not only results in lost revenue but increases the frequency of costly maintenance required to keep injection wells flowing properly.

The 940 battery also does not have sufficient surge or response capacity. Currently there is only 900 barrels of overflow capacity before high level alarms trigger the well-kills and shut in production. In the event of an upset condition, at current rates, Operations has a 90 minute window to correct the situation before production gets shut in. Chevron's operating philosophy prefers a minimum of 5 hours response time to allow for travel, hazardous weather, and trouble shooting.

Chevron proposes the construction and installation of two new 3000 barrel tanks (30 ft diameter \times 24 ft high) in accordance with API 12D and ASME B31.4. One to serve as a skim tank, reducing the amount of oil carried over into the injection system; and one to serve as an overflow tank. This would allow the existing 1500 barrel skim tank, the two 500 barrel overflow tanks, and the three 500 barrel temporary tanks to be demolished, reducing spill risk, and increasing reliability.

Emergency Flare

The emergency flare system at the 940 battery is part of a redundant safety system designed to protect production equipment from over pressuring in the event of upset conditions. The 940 battery currently produces 3-4 MMscfd of natural gas. With continued drilling planned through 2015 it is possible production could peak around 9 MMscfd in the next few years. The existing emergency flare is designed to handle rates up to 0.7 MMscfd.

Chevron proposes installing a larger flare capable of handling current and expected future gas rates approximately 230 ft north of the existing flare. The new flare is 85' tall and is engineered to handle 9-11 MMscfd. The industry standard for Pressure-relieving and De-pressuring Systems (API STD 521) states thermal radiation of 500 BTU/ft²-hr is the:

Maximum radiant heat intensity at any location where personnel with appropriate clothing can be continuously exposed

At the expected future volumes, a taller than usual flare is required to keep thermal radiation below 500 BTU/ft²-hr at distances 100 ft and greater from the base of the flare. The proposed location was the only one identified where:

- A road crossing is not required where a liquid trap would be created.
- The minimum radius for the guy-wires, due to the increased height, would not impinge upon existing right of ways.
- Thermal radiation exposure would not exceed the industry standard for continuous exposure
- Piping to the flare would not further congest the piping in the battery

The flare is being fabricated to comply with codes: API 537, ANSI B31.3, AISC-ASD, ASME VIII Div. 1, ASME IX, ASW, NEMA 4, and TNRCC.



**508 West Wall, Suite 550
Midland, Texas 79701
Phone 432-262-2700
Fax 432-561-5480**



PROPOSAL

TO: Chevron
Attn: Roger Spots

DATE: July 18, 2012
PROJECT: Skelly 940
QUOTE NO: D-12-184

We take great pleasure in offering you our proposal in response to your change order to furnish the following:

One (1) - Model FKAVP-H85-R10S-EPTKS Flare King Air Assisted Tip on a 85' OAH Guyed Stack

This change order decreases the max flow from the flare to 9 mmscfd, limits the heat radiation loading to 400-450 BTU/ft²/hr at a distance of 100' from the flare, and guys wire radius of no longer than 50'.

The Scope of Supply Includes:

- Application/Engineering
- General Arrangement Drawing
- All Materials and Labor
- Flare King Standard Weld Inspection
- One (1) 85' Tall, Carbon Steel Flare Stack.
- One (1) 304 Stainless Steel Wind Bonnet
- One (1) 10" 304 Stainless Steel Utility Flare Tip
- One (1) 8" 150# RF Inlet Flange
- Two (2) Retractable Continuous Pilot with 'K' type Thermocouple
- Two (2) Pilot Fuel Gas Regulator, Teflon/Stainless Steel Fuel Gas Line.
- Two (2) Solar Ignition Controls with 'K' type Thermocouple Monitor
- One (1) 1-1/2 hp, 240V/60 Hz/3-Ph NYB blower
- Two (2) Sets of 3 Guy wires, clamps, and thimbles
- One (1) Set 1/2" Sight Glass Port Connections
- One (1) 2" Drain
- Surface Cleaning
- Primer & Paint per NGSIGI Specifications as Required (carbon steel only, Color: Gloss Black)
- Preparation for Shipping

PRICE ADDER to FL020612: \$19,486.00 Each, ExWorks. - Midland, TX
Estimated Weight: 1,000 Pounds

VALIDITY: 30 Days From Date of this Proposal

DELIVERY: 4 - 6 Weeks ARO

Delivery times quoted are based upon routine manufacturing and key supplier deliveries. Any "Change Orders" from clients or component delays from critical suppliers may have an impact upon final

delivery. Delivery is based on single item orders. Orders for multiple units of the same model may be spread over a longer time period.

Commissioning is available at \$95 per hour travel time, \$95 per hour while on location, \$142.50 for hours in excess of 8 hours in a single day, \$2.75 per mile portal to portal, actual cost of meals, and lodging.

TERMS: This Proposal is based upon NGSF's standard terms and conditions of sale which are attached to and made a part of this quotation. Any variance in credit terms will be specified upon acceptance of order.

CANCELLATION: 150% of documented incurred costs at time of cancellation

WARRANTY: This Proposal is based upon NGSF's standard terms and conditions of sale which are attached to and made a part of this quotation.

EXCLUSIONS:

- Any equipment, materials, or services not specifically stated in this proposal
 - Installation or Commissioning
 - Any applicable sales tax, tariffs, use tax, or duties
 - Compliance to any other code than
 - API 537
 - ANSI B31.3
 - AISC-ASD
 - ASME Sect. VIII Div. 1
 - ASME Sect. IX
 - ASW
 - NEMA 4
 - TNRCC
 - Any interconnecting piping or wiring
 - Field touch-up of paint
 - Release of proprietary working drawings
 - Cost of NDT
 - Cost for transportation
-

All calculations for this flare were based on estimated data given to NGSIGI for analysis. The waste stream data is as follows:

Flow: 9,000,000 standard ft³ per day (9.00mmscfd).

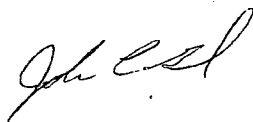
Gas Mix:

H2S Content:	Skelly 940 3000 ppm.
Methane:	70%
Ethane:	13%
Propane:	7%
Butane:	2%
Pentane+:	2%
Inlet Pressure:	52 psi
Gas Temperature:	116 °F
Power is available	
Pilot Gas is available.	

Calculations were made to verify the stack was capable of sustaining standard highwinds using MecaStack software Ver 5.1.3.6.

We appreciate your interest in our product and in giving us the opportunity to offer this quotation. We trust this proposal is satisfactory; however, should you require any additional information or clarification, please do not hesitate to call on us.

Sincerely,



John Geib

Customer Signature: _____



Customer: Chevron
Job: Skelly 940

Date: 7/11/2012 16:41

DATA ENTRY SECTION:				CALCULATED DATA:	
Relief Fluid Data:		Mol %	Duty (mmscfd): 9.000	Relief Fluid Data:	
H ₂ S	0.3000			Total Flow	9.000 mmscfd
N ₂	3.0380		Temp. °F 116	MW/SG:	23.19 0.800
O ₂	0.0000			Density:	0.0612 lb/scf
H ₂	0.0000		Inlet Pres psi 52	LHV:	1168.2 btu/scf
H ₂ O	0.0000			LHV:	19096.7 btu/lb
CO ₂	2.1510		Pilot X	k (Cp/Cv):	1.268
Methane - C ₁	70.0680			Z Compressibility:	0.9937
Ethane - C ₂	13.1080		Sparker	Viscosity	0.010 cp
Propane - C ₃	6.5500			C:H ratio:	0.278
isoButane - iC ₄	0.7640		Retrackable X	Flow:	22913.1 lb/hr
neoButane - nC ₄	1.9310			Duty:	437.56 mmBTU/hr
isoPentane - iC ₅	0.5200		Guyed X	Flow:	122.774 acfs
neoPentane - nC ₅	0.5350			Air Req'd:	76036.8 scfm
Hexane - C ₆	1.0350		Free Standing	Air Req'd(ft ³ air / ft ³ gas):	12.17
Heptane - C ₇	0.0000			Flare Data:	
Octane - C ₈	0.0000		Solar	Calc'd Emissivity:	0.231
Ethylene	0.0000			Tip ΔP:	14.18 in H ₂ O
Propylene	0.0000		Enclosed	Tip Velocity:	222.9 fps
Benzene	0.0000			Sonic Velocity:	1251.6 fps
Toluene	0.0000			Mach Number:	0.18
Ethylbenzene	0.0000			Flame Length (less assist air):	74.6 ft
m-Xylene	0.0000			Min. Flare Height:	49.6 ft @base
Total:	100.0			H ₂ S Flare Height:	51.0 ft
Gas Assist Target LHV	btu/scf			# Pilots Req'd	2 ea
Assist Air:	1,000 scfm			U _{wind} /U _{exit} :	0.13
Radiation Criteria:				Δx:	65.7 ft
Max Rad@Base:	1500 btu/hr.ft ²			Δy:	32.7 ft
Emissivity:	0.231				
Atm. Temp:	116 °F			Vmax=	595.8 ft/s
Relative Humidity:	50. %	Dist, horiz.(ft)		Air Assit Vmax=	128.1 ft/s
Wind velocity:	29.3 fps	0.0		Radiation(btu/hr.ft²)	Rad Factor
Flare Tip φ:	10 in	25.0		575.1	0.82
Flare Height(oah):	85 ft	50.0		633.6	0.82
Tip Press.	13.8 psia	100.0		619.1	0.82
Rad Factor:		125.0		437.9	0.81
		150.0		342.4	0.81
		175.0		265.7	0.80
		200.0		207.6	0.80
				164.4	0.79



TECHNICAL DATA

DESCRIPTION: 10" AIR ASSIST TIP WITH RETRACKTABLE PILOT ON
85' OAH GUYED STACK

CUSTOMER: Chevron

DESIGN PARAMETERS:

FLOW RATE: 9.000 mmscfd
TEMPERATURE: 116 °F
MOLECULAR WEIGHT: 23.19 lb/lb-mol
TIP PRESSURE DROP: 0.51 psig
EXIT VELOCITY: 222.9 fps
MACH NO.: 0.18

UTILITIES:

PURGE GAS (w/seal): N/A
PURGE GAS (w/o seal): 55.3 cfh
ASSIST GAS: N/A
PILOT GAS: 8-12 cfh @ 10 psig

ELECTRIC:

IGNITION: 120V-1Ph-60Hz
CONTROLS: 120V-1Ph-60Hz
BLOWER: 220V-3Ph-60Hz

ENVIRONMENTAL:

RADIATION ON GRADE @DESIGN FLOW RATE, Btu/SF/Hr:

	(@Distance from base, ft)				Wind@ 20.0 mph.			
@ BASE	25	50	100	125	150	175	200	
	575.1	633.6	619.1	437.9	342.4	265.7	207.6	164.4

NOTE: Radiation does not include solar radiation (approx. 250 btu/hr).

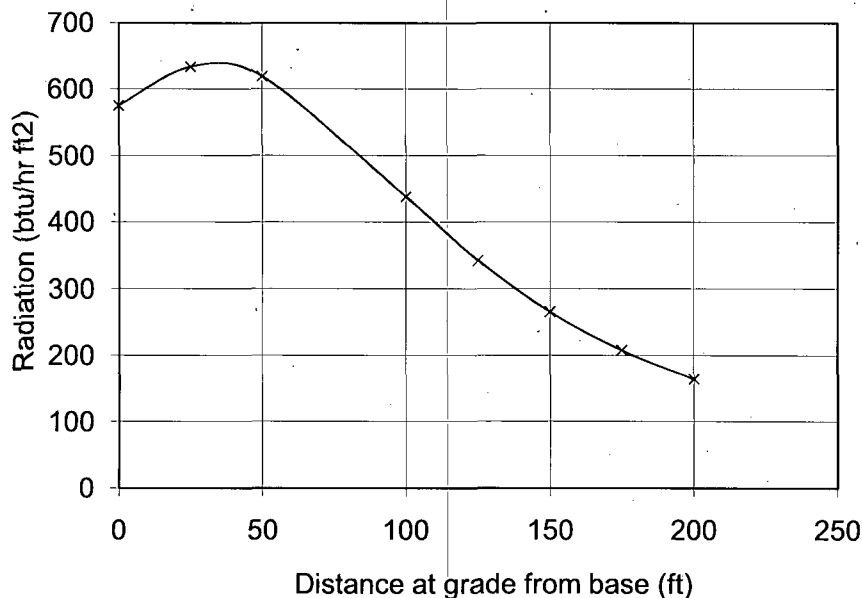
DESTRUCTION EFFICIENCY: 98%



Customer: Chevron
Job: Skelly 940

Wind Velocity: 20.0 mph

Radiation vs. Distance



NOTE: Radiation does not include solar radiation (approx. 250 btu/hr).

Recommended Design Total Radiation (from API RP-521)

Permissible Design Level (K) (BTU/hr ft ²)	Conditions
5000	Heat intensity on structures and in areas where operators are not likely to be performing duties and where shelter from radiant heat is available (for example, behind equipment)
3000	Value of K at design flare release at any location to which people have access (for example, at grade below the flare or a service platform of a nearby tower); exposure should be limited to a few seconds, sufficient for escape only.
2000	Heat intensity in areas where emergency actions lasting up to 1 minute may be required by personnel without shielding but with appropriate clothing.
1500	Heat intensity in areas where emergency actions lasting several minutes may be required by personnel without shielding but with appropriate clothing.
500	Value of K at any location where personnel with appropriate clothing may be continuously exposed.



EMISSION ESTIMATE

Customer: Chevron

Minimum Stack *
Height for H₂S (ft) ==> 50.75

Relief Fluid Data:	Flow Rate		0.6 (lb/hr)	Effency %	Emissions		w/ Comb.Prod.	
	Mol %	(scfh)			(lb/hr)	(lb mol/hr)	(lb mol/hr)	(mol %)
H ₂ S	0.300	1125.0	100.99	98.0	2.020	0.059	0.059	0.002
N ₂	3.038	11392.5	840.77	0.0	840.77	30.011	30.011	0.816
O ₂	0.000	0.0	0.00	100.0	0.00	0.000	0.000	0.000
H ₂	0.000	0.0	0.00	98.0	0.00	0.000	0.000	0.000
H ₂ O	0.000	0.0	0.00	0.0	0.00	0.000	2262.777	61.547
CO ₂	2.151	8066.3	935.43	0.0	935.43	21.255	1364.035	37.101
C ₁	70.068	262755.0	11105.45	98.0	222.11	13.845	13.845	0.377
C ₂	13.108	49155.0	3895.01	99.0	38.95	1.295	1.295	0.035
C ₃	6.550	24562.5	2854.11	99.0	28.54	0.647	0.647	0.018
nC ₄	0.764	2865.0	438.81	98.0	8.78	0.151	0.151	0.004
iC ₄	1.931	7241.3	1109.09	98.0	22.18	0.382	0.382	0.010
nC ₅	0.520	1950.0	370.72	98.0	7.41	0.103	0.103	0.003
iC ₅	0.535	2006.3	381.42	98.0	7.63	0.106	0.106	0.003
C ₆	1.035	3881.3	881.30	98.0	17.63	0.205	0.205	0.006
C ₇	0.000	0.0	0.00	98.0	0.00	0.000	0.000	0.000
C ₈	0.000	0.0	0.00	98.0	0.00	0.000	0.000	0.000
C ₂ H ₄	0.000	0.0	0.00	98.0	0.00	0.000	0.000	0.000
C ₃ H ₆	0.000	0.0	0.00	98.0	0.00	0.000	0.000	0.000
C ₆ H ₆	0.000	0.0	0.00	98.0	0.00	0.000	0.000	0.000
C ₇ H ₈	0.000	0.0	0.00	98.0	0.00	0.000	0.000	0.000
C ₈ H ₁₀	0.000	0.0	0.00	98.0	0.00	0.000	0.000	0.000
m-C ₈ H ₁₀	0.000	0.0	0.00	98.0	0.00	0.000	0.000	0.000
SO ₂	na	na	na	na	na	na	2.9043	0.079
Total:	100.000	375000.0	22913.1		2131.46	68.059	3676.520	100.000

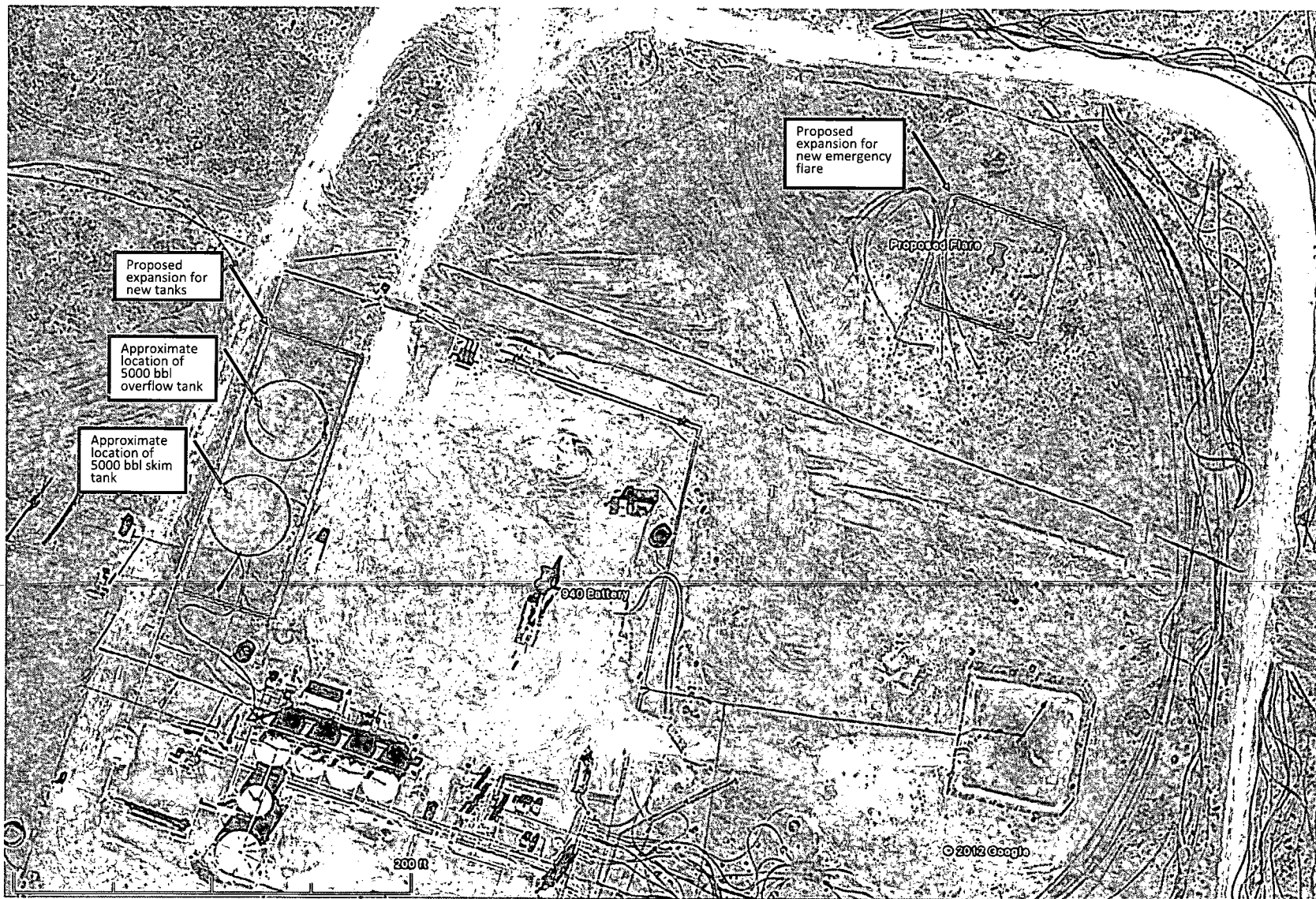
Duty_(mmscfd): 9.0000

LHV_(btu/scf): 1168.2

NO _x	0.1380 /MM Btu =	60.3839 lb/hr	264.482 ton NO _x /yr
CO	0.2755 /MM Btu =	33.8244 lb/hr	148.151 ton CO/yr
SO ₂		186.0654 lb/hr	814.966 ton SO ₂ /yr

H ₂ S	16.122 (ppmv)
H ₂ S	41.926 (ppmv)dry

* Per TNRCC 106.352 Subchapter 'O'



BLM Lease Number: NMLC29419A
Company Reference: Chevron USA
Well Name & Number: Skelly Unit 940

STANDARD STIPULATIONS FOR OIL AND GAS RELATED SITES
(Production Facility Pad Expansion and Flare Site)

A copy of the Sundry Notice and attachments, including stipulations and map, will be on location during construction. BLM personnel may request to view a copy of your permit during construction to ensure compliance with all stipulations.

The holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer, BLM.

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 and for all response costs, penalties, damages, claims, and other costs arising from the provisions of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Chap. 82, Section 6901 et. seq., from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. Chap. 109, Section 9601 et. seq., and from other applicable environmental statutes.
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 U.S.C. 2601, et. seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, 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 the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
4. If, during any phase of the construction, operation, maintenance, or termination of the site or related pipeline(s), any oil or other pollutant should be discharged from site facilities, the pipeline(s) or from containers or vehicles impacting Federal lands, the control and total removal, disposal, and cleanup of such oil or other pollutant, wherever found, shall be the responsibility of

the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting therefrom, the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

5. Sites shall be maintained in an orderly, sanitary condition at all times. Waste materials, both liquid and solid, shall be disposed of promptly at an appropriate, authorized waste disposal facility in accordance with all applicable State and Federal laws. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, petroleum products, brines, chemicals, oil drums, ashes, and equipment.

6. In those areas where erosion control structures are required to stabilize soil conditions, the holder shall install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound management practices. Any earth work will require prior approval by the Authorized Officer.

7. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color from BLM's "Standard Environmental Color Chart". The color selected for this project is **Shale Green**. A color chart can be picked up from the BLM Carlsbad Field Office.

8. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The 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 the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

9. A sales contract for removal of mineral material (caliche, sand, gravel, fill dirt) from an authorized pit, site, or on location must be obtained from the BLM prior to commencing construction. There are several options available for purchasing mineral material: contact the BLM office (575-234-5972).

10. 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.

11. Once the site is no longer in service or use, the site must undergo final abandonment. At final abandonment, the site 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 the abandonment of the site. All pads and 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. 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 environmental protection specialist prior to surface abandonment operations for site specific objectives (575-234-5972).

12. The holder shall stockpile an adequate amount of topsoil where blading occurs. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles. The topsoil will be used for final reclamation.

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

- | | |
|--|--|
| <input type="checkbox"/> seed mixture 1 | <input type="checkbox"/> seed mixture 3 |
| <input checked="" type="checkbox"/> seed mixture 2 | <input type="checkbox"/> seed mixture 4 |
| <input type="checkbox"/> seed mixture 2/LPC | <input type="checkbox"/> Aplomado Falcon Mixture |

14. **Containment Structures:** The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

15. Special Stipulations:

Lesser Prairie-Chicken

Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.