Carlsbad Field Office
OCD Artesia

NM OIL CONSERVATION
ARTESIA DISTRICT
MAY 25 2017
RECEIVED

Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. Top
NMNM116028;NMNM120350

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
HH SO 12 FED COM #2H 315666

2. Name of Operator
CHEVRON USA INC. 4323

9. API Well No.
30-015-44205

3a. Address
1616 W. BENDER BLVD HOBBS, NM 88240

3b. Phone No. *(include area code)*
575-263-0431

10. Field and Pool, or Exploratory
~~WILDCAT~~; BONE SPRING HAY Hollow 30215

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface ~~2660' FSL~~ 2657 FNL & 1294' FWL
At proposed prod. zone 180' FSL & 660' FWL

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 12 T26S,R27E, UL L (SHL)

14. Distance in miles and direction from nearest town or post office*
15 S/SW MILES FROM MALAGA,NM

12. County or Parish
EDDY

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) ~~2660' FSL~~ 2657' FNL

16. No of acres in lease
1560 acres

17. Spacing Unit dedicated to this well
240 ACRES

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
1100' SRO #7H-COG

19. Proposed Depth
TD 7830' MD 14,952'

20. BLM/BIA Bond No. in file
CA 0329

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3189' GL

22. Approximate date work will start*
10/01/2016

23. Estimated duration
30 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature Cindy Herrera-Murillo
Name *(Printed/Typed)* CINDY HERRERA-MURILLO
Date 05/03/2016

Title
PERMITTING SPECIALIST

Approved by *(Signature)* Cody R. Layton
Name *(Printed/Typed)* Cody R. Layton
Date 05/18/17

Title for FIELD MANAGER
Office CARLSBAD FIELD OFFICE

Application approval 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.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

(Continued on page 2)

*(Instructions on page 2)

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 24th day of March, 2016

Name: _____

Sean Cheben-Project Manager

Address: 1400 Smith Street

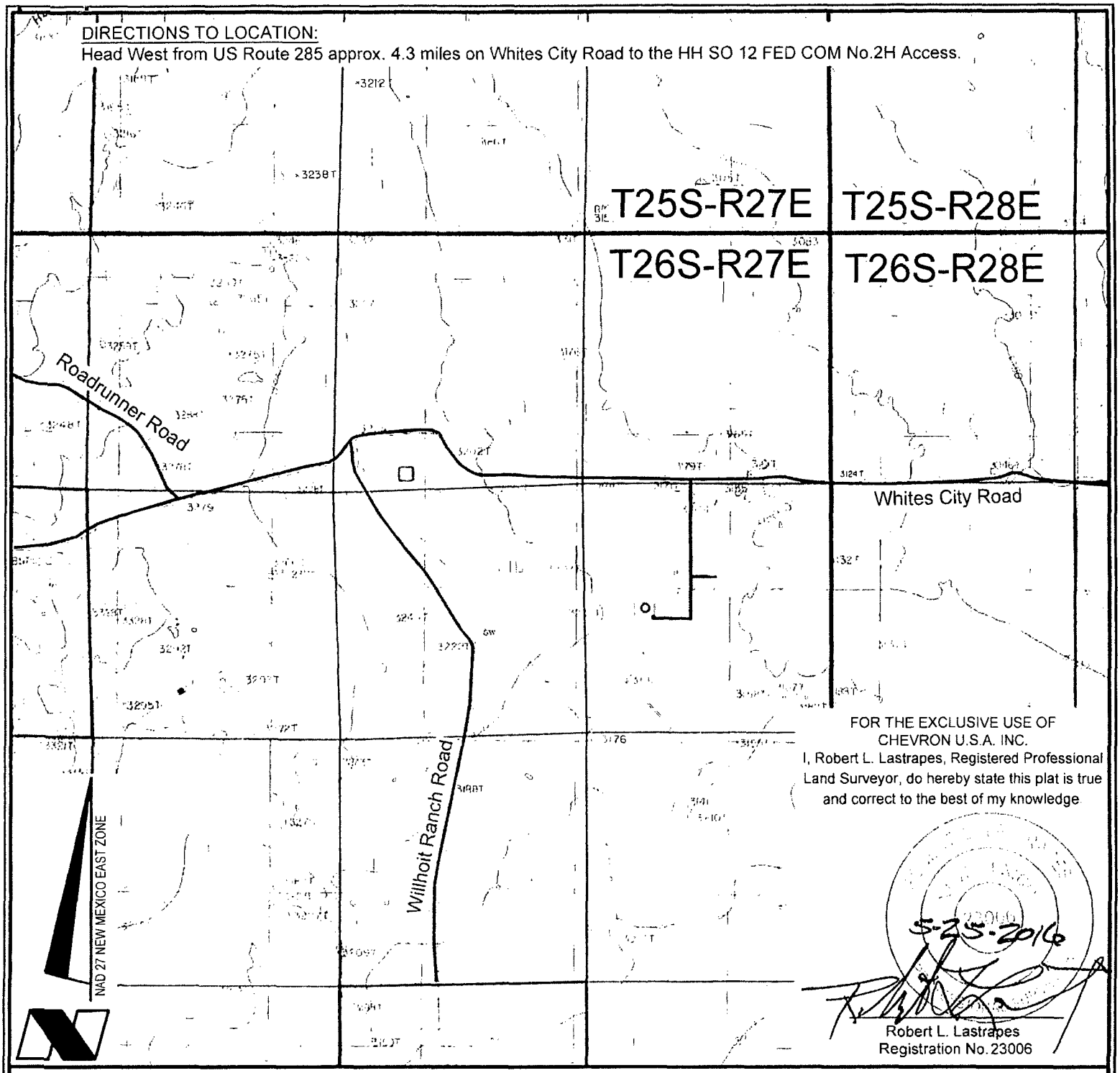
Houston, TX 77002

Room 40125

Office: 713-372-9382

Email: Sean.Cheben@CHEVRON.COM

DIRECTIONS TO LOCATION:
Head West from US Route 285 approx. 4.3 miles on Whites City Road to the HH SO 12 FED COM No.2H Access.



FOR THE EXCLUSIVE USE OF
CHEVRON U.S.A. INC.
I, Robert L. Lastrapes, Registered Professional Land Surveyor, do hereby state this plat is true and correct to the best of my knowledge

5-25-2016

Robert L. Lastrapes
Registration No. 23006

APD

Scale: 1" = 3000'
3,000' 0 1,500' 3,000'

LEGEND

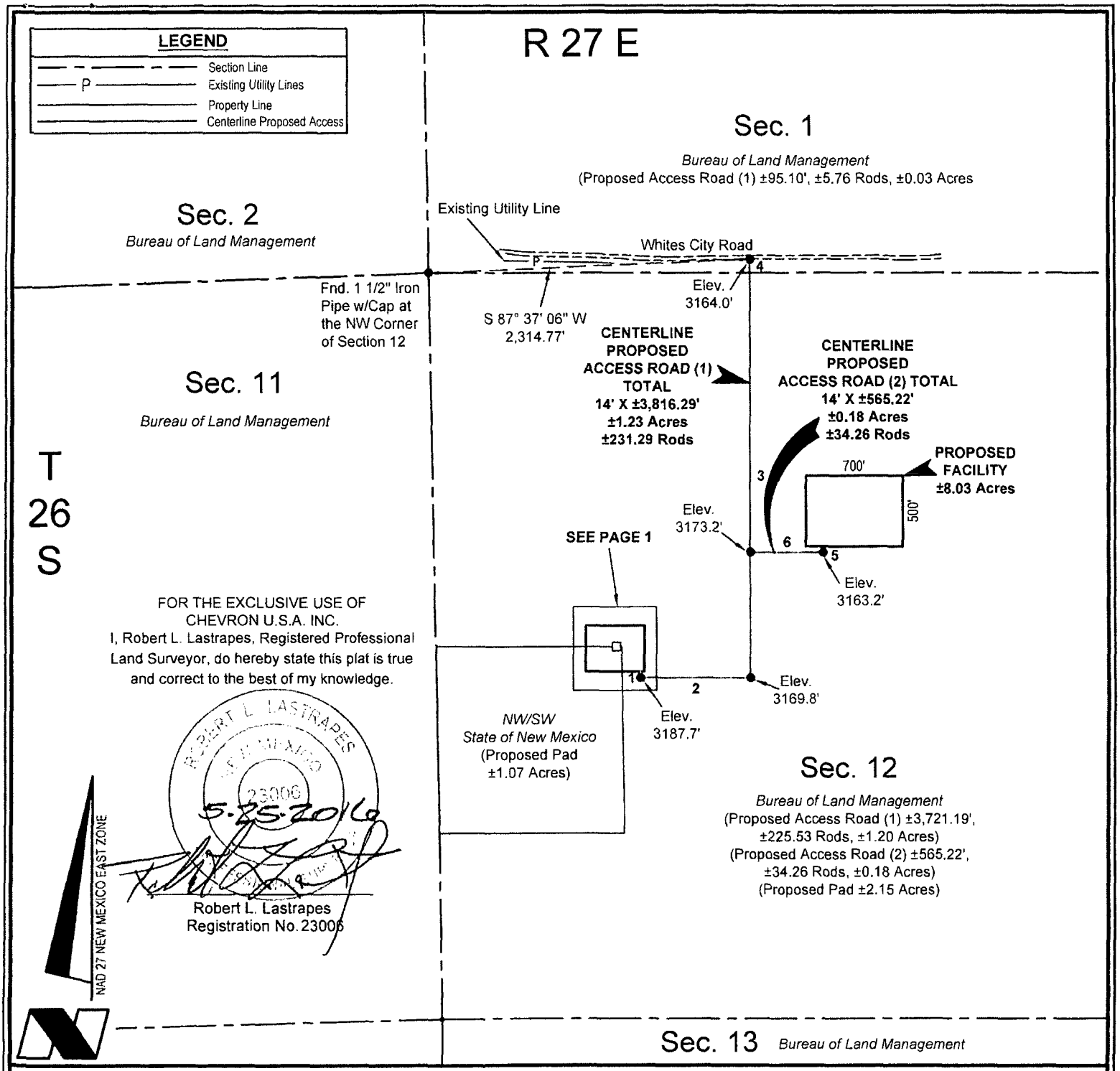
- Proposed Well
- Proposed Access Road
- Proposed Drillsite
- Existing Road
- Section Line
- Existing Frac Pond
- Proposed Facility

CHEVRON U.S.A. INC.

HH SO 12 FED COM NO. 2H WELL
LOCATED 2,657' FNL & 1,294' FWL
SECTION 12, T26S-R27E
EDDY COUNTY, NEW MEXICO

FENSTERMAKER
C H Fenstermaker & Associates, L.L.C.
135 Regency Sq Lafayette, LA 70508
Ph 337-237-2200 Fax 337-232-3299
www.fenstermaker.com

DRAWN BY: BOR	REVISIONS		
PROJ. MGR : GDG	No. 1	DATE: 03/23/2016	REVISED BY: BOR
DATE: 03/04/2016	No. 2	DATE: 05/25/2016	REVISED BY: GDG
FILENAME: T:\2016\2163675\DWG\HH SO 12 FED COM 2H APD.dwg			



SURFACE USE PLAT

Scale: 1" = 1000'

1000' 0 500' 1000'

CHEVRON U.S.A. INC.

PROPOSED PAD, ACCESS ROADS & FACILITY
HH SO 12 FED COM NO. 2H WELL
SECTIONS 1 & 12, T26S-R27E
EDDY COUNTY, NEW MEXICO

FENSTERMAKER
C H Fenstermaker & Associates, L.L.C
135 Regency Sq. Lafayette, LA 70508
Ph 337-237-2200 Fax 337-232-3299
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DATE: 03/04/2016	No. 2	DATE: 05/25/2016	REVISED BY: GDG
FILENAME: T:\2016\2163675\DWG\HH SO 12 FED COM 2H SUP.dwg			

NOTE:
Please be advised, that while reasonable efforts are made to locate and verify pipelines and anomalies using our standard pipeline locating equipment, it is impossible to be 100 % effective. As such, we advise using caution when performing work as there is a possibility that pipelines and other hazards, such as fiber optic cables, PVC pipelines, etc. may exist undetected on site.

NOTE:
Many states maintain information centers that establish links between those who dig (excavators) and those who own and operate underground facilities (operators). It is advisable and in most states, law, for the contractor to contact the center for assistance in locating and marking underground utilities. For guidance: New Mexico One Call - www.nmonecall.org.

DISCLAIMER: At this time, C. H. Fenstermaker & Associates, L.L.C. has not performed nor was asked to perform any type of engineering, hydrological modeling, flood plain, or "No Rise" certification analyses, including but not limited to determining whether the project will impact flood hazards in connection with federal/FEMA, state, and/or local laws, ordinances and regulations. Accordingly, Fenstermaker makes no warranty or representation of any kind as to the foregoing issues, and persons or entities using this information shall do so at their own risk.

CENTERLINE PROPOSED ACCESS ROAD (1)		
COURSE	BEARING	DISTANCE
1	S 00° 00' 03" W	45.13'
2	S 89° 59' 26" E	793.72'
3	N 00° 00' 05" W	2882.34'
4	N 00° 00' 05" W	95.10'

CENTERLINE PROPOSED ACCESS ROAD (2)		
COURSE	BEARING	DISTANCE
5	S 00° 14' 37" E	43.44'
6	S 89° 59' 55" W	521.78'

NW FACILITY CORNER	NE FACILITY CORNER
X= 558,863 NAD 27 Y= 385,687	X= 559,563 NAD 27 Y= 385,687
ELEVATION +3169' NAVD 88	ELEVATION +3161' NAVD 88
SE FACILITY CORNER	SW FACILITY CORNER
X= 559,563 NAD 27 Y= 385,187	X= 558,863 NAD 27 Y= 385,187
ELEVATION +3166' NAVD 88	ELEVATION +3156' NAVD 88

FOR THE EXCLUSIVE USE OF
CHEVRON U.S.A. INC.
I, Robert L. Lastrapes, Registered Professional Land Surveyor, do hereby state this plat is true and correct to the best of my knowledge.

ROBERT L. LASTRAPES
NEW MEXICO
23006
5.25.2016

Robert L. Lastrapes
Registration No. 23006

SURFACE USE PLAT

CHEVRON U.S.A. INC.

PROPOSED PAD, ACCESS ROADS & FACILITY
HH SO 12 FED COM NO. 2H WELL
SECTIONS 1 & 12, T26S-R27E
EDDY COUNTY, NEW MEXICO

FENSTERMAKER
C H Fenstermaker & Associates, L L C
135 Regency Sq Lafayette, LA 70508
Ph 337-237-2200 Fax 337-232-3299
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DRAWN BY: BOR	REVISIONS		
PROJ. MGR.: GDG	No. 1	DATE: 03/23/2016	REVISED BY: BOR
DATE: 03/04/2016	No. 2	DATE: 05/25/2016	REVISED BY: GDG
FILENAME: T:\2016\2163675\DWG\HH SO 12 FED COM 2H SUP.dwg			

1. **FORMATION TOPS**

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA TVD	KBTVD	MD
Castille		505	
Lamar		2395	
Bell		2310	
Cherry		3208	
Brushy		4450	
Bone Spring/Avalon		6299	
First Bone Spring Sand		6888	
First Bone Spring Shale		6914	
Second Bone Spring Sand		7830	
Second Bone Spring Sand		7830	14952

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 Expected Base of Fresh Water		450
Water	Castille	505
Water	Cherry Canyon	3208
Oil/Gas	Brushy Canyon	4450
Oil/Gas	Bone Spring Limestone	6888
Oil/Gas	First Bone Spring Shale	6914
Oil/Gas	Second Bone Spring Sand	7830

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

4. **CASING PROGRAM**

a. The proposed casing program will be as follows:

Purpose	From	To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	425'	17-1/2"	13-3/8"	54.5 #	K-55	STC	New
Intermediate	0'	2,100'	12-1/4"	9-5/8"	40.0 #	L-80	LTC	New
Production	0'	14,952'	8-3/4"	5-1/2"	20.0 #	L-80	TXP	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: 425'
Intermediate Casing: 2100'
Production Casing: 14952' MD/7,830' TVD (7,500' VS @ 90 deg inc)

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension	Min SF Tri-Axial
Surface	1.82	6.17	4.54	2.28
Intermediate	3.82	3.51	4.19	4.83
Production	1.27	2.40	1.99	1.46

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

5. **CEMENTING PROGRAM**

Slurry	Type	Top	Bottom	Weight	Yield	%Excess	Sacks	Water
Cement				(ppg)	(sx/cu ft)	Open Hole		gal/sk
Tail	Class C	0'	450'	14.8	1.33	125	232	6.37
2nd Stage Lead								
Lead	Class C + Extender, Antifoam, Retarder	0'	1,100'	13.7	1.62	150	212	8.49
Tail	Class C + Retarder	1,100'	2,100'	14.8	1.33	85	235	6.37
Production								
1st Lead	50:50 Poz: Class H + Extender, Antifoam, Dispersant, Viscosifier, Retarder	0'	2,100'	11.5	2.52	50	210	14.83
2nd Lead	TXI + Extender, Antifoam, Dispersant, Fluid Loss, Retarder, Viscosifier	2,100'	7,617'	12.5	1.59	35	876	8.54
Tail	Class H	7,123'	14,952'	15	2.18	0	906	9.547

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.

6. **MUD PROGRAM**

From	To	Type	Weight	F. Vis	Filtrate
0'	450'	Spud Mud	8.3 - 8.7	32 - 34	NC - NC
450'	2,100'	WBM	9.5-10.0	30-40	NC -NC
2,100'	14,952'	WBM	9.0-9.5	30-40	5.0 - 10

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	Int. and Prod. Hole	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. There is a pressure ramp that will be seen in the Wolfcamp B formation expected. Estimated BHP is: **3801 psi**
b. Hydrogen sulfide gas is not anticipated. An H2S Contingency plan is attached with this APD in the event that H2S is encountered

Chevron

Plan Rev0

Chevron

RKB 25 ft

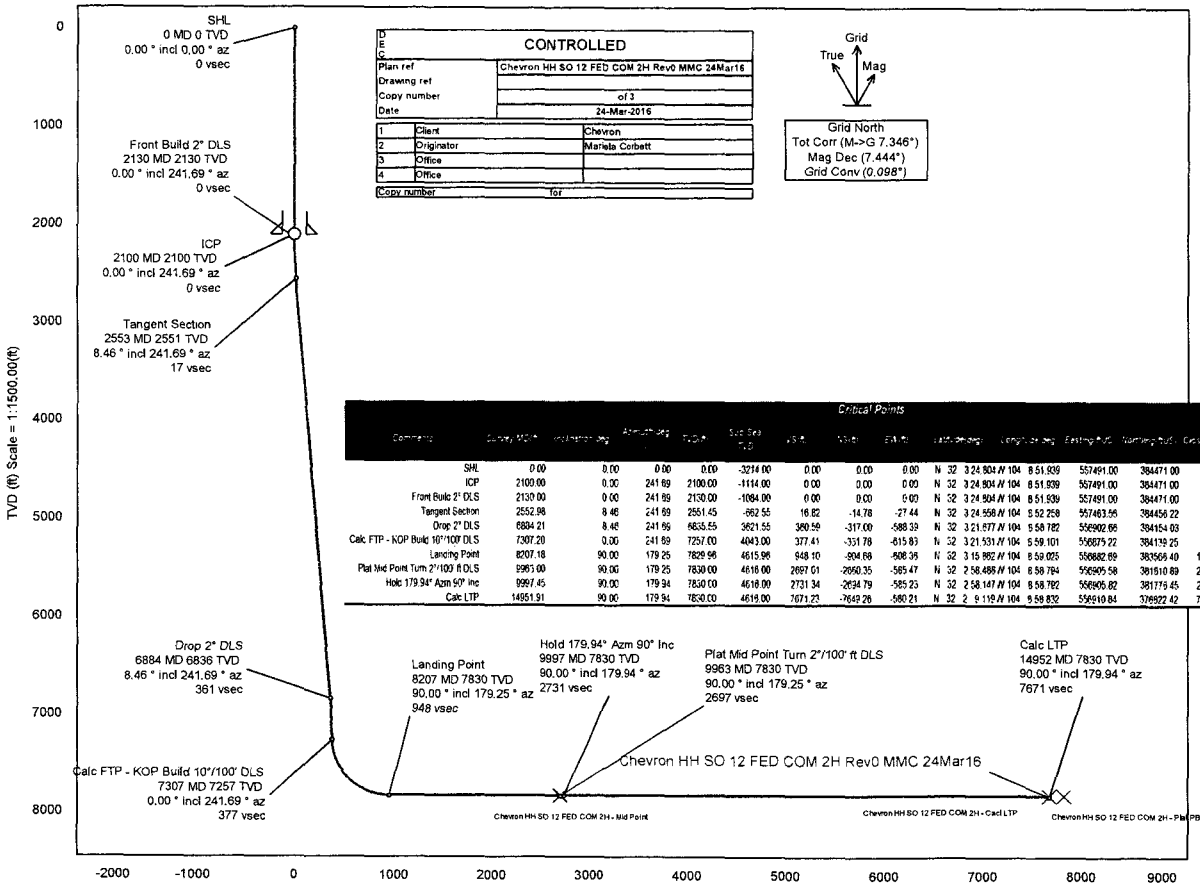
Schlumberger

Borehole:	Well:	Field:	Structure:
Original Borehole	HH SO 12 FED COM 2H	NM Eddy County (NAD 27)	TBD

Gravity & Magnetic Parameters
Model: HDGM 2016 Dip: 59.811° Date: 24-Mar-2016
MagDec: 7.444° FS: 48164.358nT Gravity FS: 998.434mgn (9.80665 Based)

Surface Location *NAD27 New Mexico State Plane, Eastern Zone, US Feet*
Lat: N 32 3 24.80 Northing: 384471ftUS Grid Conv: 0.0985°
Lon: W 104 8 51.94 Easting: 557491ftUS Scale Fact: 0.99991288

Miscellaneous
Slot: Chevron HH SO 12 FED COM 2H TVD Ref: RKB(3214ft above MSL)
Plan: Chevron HH SO 12 FED COM 2H Rev0 MMC 24Mar16

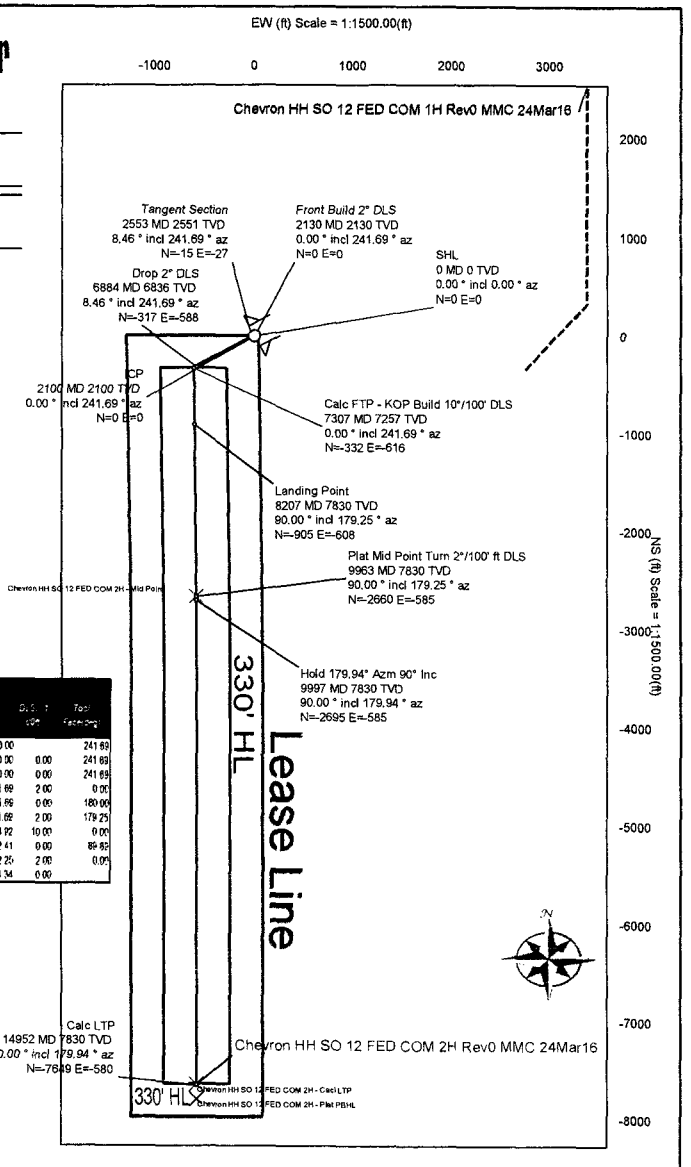


DEC	CONTROLLED	
	Plan ref	Chevron HH SO 12 FED COM 2H Rev0 MMC 24Mar16
	Drawing ref	
	Copy number	of 3
	Date	24-Mar-2016
1	Client	Chevron
2	Originator	Mariela Corbett
3	Office	
4	Office	
Copy number	for	

Grid
True Mag
Grid North
Tot Corr (M->G 7.346°)
Mag Dec (7.444°)
Grid Conv (0.098°)

Critical Points

Comments	Survey MD ft	Inclination deg	Azimuth deg	TVD ft	Sub Sea TVD	VSec ft	NS ft	EW ft	Latitude deg	Longitude deg	Easting ftUS	Northing ftUS	Closure ft	Closure Azimuth deg	DLS °/100'	Tool Face deg
SHL	0.00	0.00	0.00	0.00	-3214.00	0.00	0.00	0.00	N 32	3 24.804 W 104	8 51.939	557491.00	384471.00	0.00	0.00	241.69
ICP	2100.00	0.00	241.69	2100.00	-1114.00	0.00	0.00	0.00	N 32	3 24.804 W 104	8 51.939	557491.00	384471.00	0.00	0.00	241.69
Front Build 2° DLS	2130.00	0.00	241.69	2130.00	-1084.00	0.00	0.00	0.00	N 32	3 24.804 W 104	8 51.939	557491.00	384471.00	0.00	0.00	241.69
Tangent Section	2552.98	8.46	241.69	2551.45	-662.55	16.82	-14.78	-27.44	N 32	3 24.658 W 104	8 52.258	557463.56	384456.22	31.17	241.69	2.00	0.00
Drop 2° DLS	6884.21	8.46	241.69	6835.55	3621.55	360.59	-317.00	-588.39	N 32	3 21.677 W 104	8 58.782	556902.66	384154.03	668.35	241.69	0.00	180.00
Calc FTP - KOP Build 10°/100' DLS	7307.20	0.00	241.69	7257.00	4043.00	377.41	-331.78	-615.83	N 32	3 21.531 W 104	8 59.101	556875.22	384139.25	699.52	241.69	2.00	179.25
Landing Point	8207.18	90.00	179.25	7829.96	4615.96	948.10	-904.66	-608.36	N 32	3 15.882 W 104	8 59.025	556882.69	383566.40	1090.21	213.92	10.00	0.00
Plat Mid Point Turn 2°/100' ft DLS	9963.00	90.00	179.25	7830.00	4616.00	2697.01	-2660.35	-585.47	N 32	2 58.486 W 104	8 58.784	556905.58	381910.89	2724.01	192.41	0.00	89.82
Hold 179.94° Azm 90° Inc	9997.45	90.00	179.94	7830.00	4616.00	2731.34	-2694.79	-585.23	N 32	2 58.147 W 104	8 58.782	556905.82	381775.45	2757.81	192.25	2.00	0.05
Calc LTP	14951.91	90.00	179.94	7830.00	4616.00	7671.23	-7649.26	-580.21	N 32	2 9.119 W 104	8 59.832	556910.84	376922.42	7671.23	184.34	0.00	



Schlumberger

Chevron

Chevron HH SO 12 FED COM 2H Rev0 MMC 24Mar16 Proposal Geodetic Report

(Non-Def Plan)

Report Date:	March 24, 2016 - 02:25 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Chevron	**Vertical Section Azimuth:**	184.338 ° (Grid North)
Field:	NM Eddy County (NAD 27)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Chevron HH SO 12 FED COM 2H / Chevron HH SO 12 FED COM 2H	**TVD Reference Datum:**	RKB
Well:	Chevron HH SO 12 FED COM 2H	**TVD Reference Elevation:**	3214.000 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3189.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	7.444 °
Survey Name:	Chevron HH SO 12 FED COM 2H Rev0 MMC 24Mar16	**Total Gravity Field Strength:**	998.4344mgn (9.80665 Based)
Survey Date:	March 24, 2016	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	107.607 ° / 8017.197 ft / 6.217 / 1.024	**Total Magnetic Field Strength:**	48154.358 nT
Coordinate Reference System:	NAD27 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.811 °
Location Lat / Long:	N 32° 3' 24.80425", W 104° 8' 51.93883"	**Declination Date:**	March 24, 2016
Location Grid N/E Y/X:	N 384471.000 ftUS, E 557491.000 ftUS	**Magnetic Declination Model:**	HDGM 2015
CRS Grid Convergence Angle:	0.0985 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99991288	**Grid Convergence Used:**	0.0985 °
Version / Patch:	2.9.365.0	**Total Corr Mag North->Grid North:**	7.3454 °
		Local Coord Referenced To:	Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	0.00	0.00	-3214.00	0.00	0.00	0.00	N/A	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	100.00	0.00	241.69	100.00	-3114.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	200.00	0.00	241.69	200.00	-3014.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	300.00	0.00	241.69	300.00	-2914.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	400.00	0.00	241.69	400.00	-2814.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	500.00	0.00	241.69	500.00	-2714.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	600.00	0.00	241.69	600.00	-2614.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	700.00	0.00	241.69	700.00	-2514.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	800.00	*0.00*	*241.69*	*800.00*	*-2414.00*	*0.00*	*0.00*	*0.00*	*0.00*	*384471.00*	*557491.00*	*N 32 3 24.80*	*W 104 8 51.94*
	900.00	0.00	241.69	900.00	-2314.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	1000.00	0.00	241.69	1000.00	-2214.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	1100.00	0.00	241.69	1100.00	-2114.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	1200.00	0.00	241.69	1200.00	-2014.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	1300.00	0.00	241.69	1300.00	-1914.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	1400.00	0.00	241.69	1400.00	-1814.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	1500.00	0.00	241.69	1500.00	-1714.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	1600.00	0.00	241.69	1600.00	-1614.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	1700.00	0.00	241.69	1700.00	-1514.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	1800.00	0.00	241.69	1800.00	-1414.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	1900.00	0.00	241.69	1900.00	-1314.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
	2000.00	0.00	241.69	2000.00	-1214.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
ICP	2100.00	0.00	241.69	2100.00	-1114.00	0.00	0.00	0.00	0.00	384471.00	557491.00	N 32 3 24.80	W 104 8 51.94
Front Build 2° DLS	*2130.00*	*0.00*	*241.69*	*2130.00*	*-1084.00*	*0.00*	*0.00*	*0.00*	*0.00*	*384471.00*	*557491.00*	*N 32 3 24.80*	*W 104 8 51.94*
	2200.00	1.40	241.69	2199.99	-1014.01	0.46	-0.41	-0.75	2.00	384470.59	557490.25	N 32 3 24.80	W 104 8 51.95
	2300.00	3.40	241.69	2299.90	-914.10	2.72	-2.39	-4.44	2.00	384468.61	557486.56	N 32 3 24.78	W 104 8 51.99
	2400.00	*5.40*	*241.69*	*2399.60*	*-814.40*	*6.86*	*-6.03*	*-11.19*	*2.00*	*384464.97*	*557479.81*	*N 32 3 24.74*	*W 104 8 52.07*
	2500.00	7.40	241.69	2498.97	-715.03	12.87	-11.32	-21.01	2.00	384459.68	557470.00	N 32 3 24.69	W 104 8 52.18
Tangent Section	2552.98	8.46	241.69	2551.45	-662.55	16.82	-14.78	-27.44	2.00	384456.22	557463.56	N 32 3 24.66	W 104 8 52.26
	2600.00	8.46	241.69	2597.95	-616.05	20.55	-18.06	-33.53	0.00	384452.94	557457.47	N 32 3 24.63	W 104 8 52.33
	2700.00	8.46	241.69	2696.87	-517.13	28.49	-25.04	-46.48	0.00	384445.96	557444.52	N 32 3 24.56	W 104 8 52.48
	2800.00	8.46	241.69	2795.78	-418.22	36.42	-32.02	-59.43	0.00	384438.98	557431.57	N 32 3 24.49	W 104 8 52.63
	2900.00	8.46	241.69	2894.69	-319.31	44.36	-39.00	-72.38	0.00	384432.01	557418.62	N 32 3 24.42	W 104 8 52.78
	3000.00	8.46	241.69	2993.60	-220.40	52.30	-45.97	-85.34	0.00	384425.03	557405.67	N 32 3 24.35	W 104 8 52.93
	3100.00	8.46	241.69	3092.51	-121.49	60.23	-52.95	-98.29	0.00	384418.05	557392.72	N 32 3 24.28	W 104 8 53.08
	3200.00	8.46	241.69	3191.43	-22.57	68.17	-59.93	-111.24	0.00	384411.08	557379.77	N 32 3 24.21	W 104 8 53.23
	3300.00	8.46	241.69	3290.34	76.34	76.11	-66.91	-124.19	0.00	384404.10	557366.82	N 32 3 24.14	W 104 8 53.38
	3400.00	*8.46*	*241.69*	*3389.25*	*175.25*	*84.05*	*-73.89*	*-137.14*	*0.00*	*384397.12*	*557353.87*	*N 32 3 24.08*	*W 104 8 53.53*
	3500.00	8.46	241.69	3488.16	274.16	91.98	-80.86	-150.09	0.00	384390.14	557340.92	N 32 3 24.01	W 104 8 53.68
	3600.00	8.46	241.69	3587.07	373.07	99.92	-87.84	-163.04	0.00	384383.17	557327.97	N 32 3 23.94	W 104 8 53.84
	3700.00	8.46	241.69	3685.98	471.98	107.86	-94.82	-175.99	0.00	384376.19	557315.02	N 32 3 23.87	W 104 8 53.99
	3800.00	8.46	241.69	3784.90	570.90	115.80	-101.80	-188.95	0.00	384369.21	557302.07	N 32 3 23.80	W 104 8 54.14
	3900.00	8.46	241.69	3883.81	669.81	123.73	-108.77	-201.90	0.00	384362.24	557289.12	N 32 3 23.73	W 104 8 54.29
	4000.00	8.46	241.69	3982.72	768.72	131.67	-115.75	-214.85	0.00	384355.26	557276.17	N 32 3 23.66	W 104 8 54.44
	4100.00	8.46	241.69	4081.63	867.63	139.61	-122.73	-227.80	0.00	384348.28	557263.22	N 32 3 23.59	W 104 8 54.59
	4200.00	8.46	241.69	4180.54	966.54	147.54	-129.71	-240.75	0.00	384341.31	557250.27	N 32 3 23.52	W 104 8 54.74
	4300.00	8.46	241.69	4279.46	1065.46	155.48	-136.68	-253.70	0.00	384334.33	557237.32	N 32 3 23.46	W 104 8 54.89
	4400.00	8.46	241.69	4378.37	1164.37	163.42	-143.66	-266.65	0.00	384327.35	557224.37	N 32 3 23.39	W 104 8 55.04
	4500.00	8.46	241.69	4477.28	1263.28	171.36	-150.64	-279.61	0.00	384320.37	557211.42	N 32 3 23.32	W 104 8 55.19
	4600.00	8.46	241.69	4576.19	1362.19	179.29	-157.62	-292.56	0.00	384313.40	557198.47	N 32 3 23.25	W 104 8 55.34
	4700.00	8.46	241.69	4675.10	1461.10	187.23	-164.59	-305.51	0.00	384306.42	557185.52	N 32 3 23.18	W 104 8 55.49
	4800.00	8.46	241.69	4774.02	1560.02	195.17	-171.57	-318.46	0.00	384299.44	557172.57	N 32 3 23.11	W 104 8 55.64
	4900.00	*8.46*	*241.69*	*4872.93*	*1658.93*	*203.10*	*-178.55*	*-331.41*	*0.00*	*384292.47*	*557159.62*	*N 32 3 23.04*	*W 104 8 55.79*
	5000.00	8.46	241.69	4971.84	1757.84	211.04	-185.53	-344.36	0.00	384285.49	557146.67	N 32 3 22.97	W 104 8 55.94
	5100.00	8.46	241.69	5070.75	1856.75	218.98	-192.50	-357.31	0.00	384278.51	557133.72	N 32 3 22.91	W 104 8 56.09
	5200.00	8.46	241.69	5169.66	1955.66	226.92	-199.48	-370.26	0.00	384271.54	557120.77	N 32 3 22.84	W 104 8 56.24
	5300.00	8.46	241.69	5268.58	2054.58	234.85	-206.46	-383.22	0.00	384264.56	557107.82	N 32 3 22.77	W 104 8 56.40
	5400.00	8.46	241.69	5367.49	2153.49	242.79	-213.44	-396.17	0.00	384257.58	557094.87	N 32 3 22.70	W 104 8 56.55
	5500.00	8.46	241.69	5466.40	2252.40	250.73	-220.42	-409.12	0.00	384250.60	557081.92	N 32 3 22.63	W 104 8 56.70
	5600.00	8.46	241.69	5565.31	2351.31	258.66	-227.39	-422.07	0.00	384243.63	557068.97	N 32 3 22.56	W 104 8 56.85
	5700.00	8.46	241.69	5664.22	2450.22	266.60	-234.37	-435.02	0.00	384236.65	557056.02	N 32 3 22.49	W 104 8 57.00
	5800.00	8.46	241.69	5763.14	2549.14	274.54	-241.35	-447.97	0.00	384229.67	557043.07	N 32 3 22.42	W 104 8 57.15
	5900.00	8.46	241.69	5862.05	2648.05	282.48	-248.33	-460.92	0.00	384222.70	557030.12	N 32 3 22.35	W 104 8 57.30
	6000.00	*8.46*	*241.69*	*5960.96*	*2746.96*	*290.41*	*-255.30*	*-473.88*	*0.00*	*384215.72*	*557017.17*	*N 32 3 22.29*	*W 104 8 57.45*
	6100.00	8.46	241.69	6059.87	2845.87	298.35	-262.28	-486.83	0.00	384208.74	557004.22	N 32 3 22.22	W 104 8 57.60
	6200.00	8.46	241.69	6158.78	2944.78	306.29	-269.26	-499.78	0.00	384201.77	556991.27	N 32 3 22.15	W 104 8 57.75
	6300.00	8.46	241.69	6257.70	3043.70	314.22	-276.24	-512.73	0.00	384194.79	556978.32	N 32 3 22.08	W 104 8 57.90
	6400.00	8.46	241.69	6356.61	3142.61	322.16	-283.21	-525.68	0.00	384187.81	556965.37	N 32 3 22.01	W 104 8 58.05
	6500.00	8.46	241.69	6455.52	3241.52	330.10	-290.19	-538.63	0.00	384180.83	556952.42	N 32 3 21.94	W 104 8 58.20
	6600.00	8.46	241.69	6554.43	3340.43	338.04	-297.17	-551.58	0.00	384173.86	556939.47	N 32 3 21.87	W 104 8 58.35
	6700.00	8.46	241.69	6653.34	3439.34	345.97	-304.15	-564.53	0.00	384166.88	556926.52	N 32 3 21.80	W 104 8 58.50
	6800.00	8.46	241.69	6752.26	3538.26	353.91	-311.12	-577.49	0.00	384159.90	556913.57	N 32 3 21.74	W 104 8 58.65
Drop 2° DLS	6884.21	8.46	241.69	6835.55	3621.55	360.59	-317.00	-588.39	0.00	384154.03	556902.66	N 32 3 21.68	W 104 8 58.78

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	6900.00	8.14	241.69	6851.17	3637.17	361.82	-318.08	-590.40	2.00	384152.95	556900.65	N 32 3 21.67	W 104 8 58.81
	7000.00	6.14	241.69	6950.39	3736.39	368.53	-323.98	-601.35	2.00	384147.05	556889.71	N 32 3 21.61	W 104 8 58.93
	7100.00	4.14	241.69	7049.98	3835.98	373.37	-328.23	-609.24	2.00	384142.80	556881.81	N 32 3 21.57	W 104 8 59.02
	7200.00	2.14	241.69	7149.83	3935.83	376.33	-330.83	-614.07	2.00	384140.20	556876.99	N 32 3 21.54	W 104 8 59.08
	7300.00	0.14	241.69	7249.80	4035.80	377.41	-331.78	-615.83	2.00	384139.25	556875.23	N 32 3 21.53	W 104 8 59.10
Calc FTP - KOP													
Build 10°/100' DLS	7307.20	0.00	241.69	7257.00	4043.00	377.41	-331.78	-615.83	2.00	384139.25	556875.22	N 32 3 21.53	W 104 8 59.10
	7400.00	9.28	179.25	7349.40	4135.40	384.88	-339.28	-615.74	10.00	384131.75	556875.32	N 32 3 21.46	W 104 8 59.10
	7500.00	19.28	179.25	7446.19	4232.19	409.42	-363.92	-615.41	10.00	384107.12	556875.64	N 32 3 21.21	W 104 8 59.10
	7600.00	29.28	179.25	7537.22	4323.22	450.33	-404.98	-614.88	10.00	384066.06	556876.18	N 32 3 20.81	W 104 8 59.09
	7700.00	39.28	179.25	7619.75	4405.75	506.36	-461.23	-614.15	10.00	384009.81	556876.91	N 32 3 20.25	W 104 8 59.08
	7800.00	49.28	179.25	7691.25	4477.25	575.81	-530.95	-613.24	10.00	383940.10	556877.82	N 32 3 19.56	W 104 8 59.07
	7900.00	59.28	179.25	7749.56	4535.56	656.58	-612.03	-612.18	10.00	383859.02	556878.88	N 32 3 18.76	W 104 8 59.06
	8000.00	69.28	179.25	7792.90	4578.90	746.20	-702.00	-611.01	10.00	383769.06	556880.05	N 32 3 17.87	W 104 8 59.05
	8100.00	79.28	179.25	7819.96	4605.96	841.96	-798.13	-609.75	10.00	383672.94	556881.30	N 32 3 16.92	W 104 8 59.04
	8200.00	89.28	179.25	7829.91	4615.91	940.95	-897.50	-608.46	10.00	383573.58	556882.60	N 32 3 15.93	W 104 8 59.03
Landing Point	8207.18	90.00	179.25	7829.96	4615.96	948.10	-904.68	-608.36	10.00	383566.40	556882.69	N 32 3 15.86	W 104 8 59.03
	8300.00	90.00	179.25	7829.96	4615.96	1040.55	-997.49	-607.15	0.00	383473.60	556883.90	N 32 3 14.94	W 104 8 59.01
	8400.00	90.00	179.25	7829.96	4615.96	1140.16	-1097.48	-605.85	0.00	383373.62	556885.20	N 32 3 13.95	W 104 8 59.00
	8500.00	90.00	179.25	7829.96	4615.96	1239.77	-1197.47	-604.55	0.00	383273.63	556886.51	N 32 3 12.96	W 104 8 58.99
	8600.00	90.00	179.25	7829.97	4615.97	1339.37	-1297.46	-603.24	0.00	383173.65	556887.81	N 32 3 11.98	W 104 8 58.97
	8700.00	90.00	179.25	7829.97	4615.97	1438.98	-1397.46	-601.94	0.00	383073.67	556889.12	N 32 3 10.99	W 104 8 58.96
	8800.00	90.00	179.25	7829.97	4615.97	1538.59	-1497.45	-600.63	0.00	382973.69	556890.42	N 32 3 10.00	W 104 8 58.95
	8900.00	90.00	179.25	7829.97	4615.97	1638.19	-1597.44	-599.33	0.00	382873.70	556891.72	N 32 3 9.01	W 104 8 58.93
	9000.00	90.00	179.25	7829.98	4615.98	1737.80	-1697.43	-598.03	0.00	382773.72	556893.03	N 32 3 8.02	W 104 8 58.92
	9100.00	90.00	179.25	7829.98	4615.98	1837.41	-1797.42	-596.72	0.00	382673.74	556894.33	N 32 3 7.03	W 104 8 58.91
	9200.00	90.00	179.25	7829.98	4615.98	1937.01	-1897.41	-595.42	0.00	382573.76	556895.63	N 32 3 6.04	W 104 8 58.89
	9300.00	90.00	179.25	7829.98	4615.98	2036.62	-1997.40	-594.12	0.00	382473.77	556896.94	N 32 3 5.05	W 104 8 58.88
	9400.00	90.00	179.25	7829.99	4615.99	2136.23	-2097.40	-592.81	0.00	382373.79	556898.24	N 32 3 4.06	W 104 8 58.87
	9500.00	90.00	179.25	7829.99	4615.99	2235.83	-2197.39	-591.51	0.00	382273.81	556899.54	N 32 3 3.07	W 104 8 58.86
	9600.00	90.00	179.25	7829.99	4615.99	2335.44	-2297.38	-590.20	0.00	382173.83	556900.85	N 32 3 2.08	W 104 8 58.84
	9700.00	90.00	179.25	7829.99	4615.99	2435.04	-2397.37	-588.90	0.00	382073.84	556902.15	N 32 3 1.09	W 104 8 58.83
	9800.00	90.00	179.25	7830.00	4616.00	2534.65	-2497.36	-587.60	0.00	381973.86	556903.46	N 32 3 0.10	W 104 8 58.82
	9900.00	90.00	179.25	7830.00	4616.00	2634.26	-2597.35	-586.29	0.00	381873.88	556904.76	N 32 2 59.11	W 104 8 58.80
Plat Mid Point													
Turn 2°/100' ft DLS	9963.00	90.00	179.25	7830.00	4616.00	2697.01	-2660.35	-585.47	0.00	381810.89	556905.58	N 32 2 58.49	W 104 8 58.79
Hold 179.94° Azm 90° Inc	9997.45	90.00	179.94	7830.00	4616.00	2731.34	-2694.79	-585.23	2.00	381776.45	556905.82	N 32 2 58.15	W 104 8 58.79
	10000.00	90.00	179.94	7830.00	4616.00	2733.88	-2697.35	-585.23	0.00	381773.89	556905.82	N 32 2 58.12	W 104 8 58.79
	10100.00	90.00	179.94	7830.00	4616.00	2833.59	-2797.35	-585.13	0.00	381673.90	556905.93	N 32 2 57.13	W 104 8 58.79
	10200.00	90.00	179.94	7830.00	4616.00	2933.30	-2897.35	-585.02	0.00	381573.91	556906.03	N 32 2 56.14	W 104 8 58.79
	10300.00	90.00	179.94	7830.00	4616.00	3033.00	-2997.35	-584.92	0.00	381473.92	556906.13	N 32 2 55.15	W 104 8 58.79
	10400.00	90.00	179.94	7830.00	4616.00	3132.71	-3097.35	-584.82	0.00	381373.93	556906.23	N 32 2 54.16	W 104 8 58.80
	10500.00	90.00	179.94	7830.00	4616.00	3232.41	-3197.35	-584.72	0.00	381273.94	556906.33	N 32 2 53.17	W 104 8 58.80
	10600.00	90.00	179.94	7830.00	4616.00	3332.12	-3297.35	-584.62	0.00	381173.95	556906.43	N 32 2 52.18	W 104 8 58.80
	10700.00	90.00	179.94	7830.00	4616.00	3431.82	-3397.35	-584.52	0.00	381073.96	556906.53	N 32 2 51.19	W 104 8 58.80
	10800.00	90.00	179.94	7830.00	4616.00	3531.53	-3497.35	-584.42	0.00	380973.97	556906.63	N 32 2 50.21	W 104 8 58.80
	10900.00	90.00	179.94	7830.00	4616.00	3631.24	-3597.35	-584.32	0.00	380873.97	556906.74	N 32 2 49.22	W 104 8 58.80
	11000.00	90.00	179.94	7830.00	4616.00	3730.94	-3697.35	-584.21	0.00	380773.98	556906.84	N 32 2 48.23	W 104 8 58.80
	11100.00	90.00	179.94	7830.00	4616.00	3830.65	-3797.35	-584.11	0.00	380673.99	556906.94	N 32 2 47.24	W 104 8 58.80
	11200.00	90.00	179.94	7830.00	4616.00	3930.35	-3897.35	-584.01	0.00	380574.00	556907.04	N 32 2 46.25	W 104 8 58.80
	11300.00	90.00	179.94	7830.00	4616.00	4030.06	-3997.35	-583.91	0.00	380474.01	556907.14	N 32 2 45.26	W 104 8 58.80
	11400.00	90.00	179.94	7830.00	4616.00	4129.77	-4097.35	-583.81	0.00	380374.02	556907.24	N 32 2 44.27	W 104 8 58.80
	11500.00	90.00	179.94	7830.00	4616.00	4229.47	-4197.35	-583.71	0.00	380274.03	556907.34	N 32 2 43.28	W 104 8 58.80
	11600.00	90.00	179.94	7830.00	4616.00	4329.18	-4297.35	-583.61	0.00	380174.04	556907.45	N 32 2 42.29	W 104 8 58.80
	11700.00	90.00	179.94	7830.00	4616.00	4428.88	-4397.35	-583.51	0.00	380074.05	556907.55	N 32 2 41.30	W 104 8 58.81
	11800.00	90.00	179.94	7830.00	4616.00	4528.59	-4497.35	-583.40	0.00	379974.05	556907.65	N 32 2 40.31	W 104 8 58.81
	11900.00	90.00	179.94	7830.00	4616.00	4628.30	-4597.35	-583.30	0.00	379874.06	556907.75	N 32 2 39.32	W 104 8 58.81
	12000.00	90.00	179.94	7830.00	4616.00	4728.00	-4697.35	-583.20	0.00	379774.07	556907.85	N 32 2 38.33	W 104 8 58.81
	12100.00	90.00	179.94	7830.00	4616.00	4827.71	-4797.35	-583.10	0.00	379674.08	556907.95	N 32 2 37.34	W 104 8 58.81
	12200.00	90.00	179.94	7830.00	4616.00	4927.41	-4897.35	-583.00	0.00	379574.09	556908.05	N 32 2 36.35	W 104 8 58.81
	12300.00	90.00	179.94	7830.00	4616.00	5027.12	-4997.35	-582.90	0.00	379474.10	556908.15	N 32 2 35.36	W 104 8 58.81
	12400.00	90.00	179.94	7830.00	4616.00	5126.82	-5097.35	-582.80	0.00	379374.11	556908.26	N 32 2 34.37	W 104 8 58.81
	12500.00	90.00	179.94	7830.00	4616.00	5226.53	-5197.35	-582.69	0.00	379274.12	556908.36	N 32 2 33.38	W 104 8 58.81
	12600.00	90.00	179.94	7830.00	4616.00	5326.24	-5297.35	-582.59	0.00	379174.13	556908.46	N 32 2 32.39	W 104 8 58.81
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	13000.00	90.00	179.94	7830.00	4616.00	5725.06	-5697.35	-582.19	0.00	378774.16	556908.86	N 32 2 28.43	W 104 8 58.82
	13100.00	90.00	179.94	7830.00	4616.00	5824.77	-5797.35	-582.09	0.00	378674.17	556908.96	N 32 2 27.45	W 104 8 58.82
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	13300.00	90.00	179.94	7830.00	4616.00	6024.18	-5997.35	-581.88	0.00	378474.19	556909.17	N 32 2 25.47	W 104 8 58.82
	13400.00	90.00	179.94	7830.00	4616.00	6123.88	-6097.35	-581.78	0.00	378374.20	556909.27	N 32 2 24.48	W 104 8 58.82
	13500.00	90.00	179.94	7830.00	4616.00	6223.59	-6197.34	-581.68	0.00	378274.21	556909.37	N 32 2 23.49	W 104 8 58.82
	13600.00	90.00	179.94	7830.00	4616.00	6323.29	-6297.34	-581.58	0.00	378174.22	556909.47	N 32 2 22.50	W 104 8 58.82
	13700.00	90.00	179.94	7830.00	4616.00	6423.00	-6397.34	-581.48	0.00	378074.23	556909.57	N 32 2 21.51	W 104 8 58.82
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	13900.00	90.00	179.94	7830.00	4616.00	6622.41	-6597.34	-581.28	0.00	377874.24	556909.78	N 32 2 19.53	W 104 8 58.82
	14000.00	90.00	179.94	7830.00	4616.00	6722.12	-6697.34	-581.18	0.00	377774.25	556909.88	N 32 2 18.54	W 104 8 58.82
	14100.00	90.00	179.94	7830.00	4616.00	6821.82	-6797.34	-581.07	0.00	377674.26	556909.98	N 32 2 17.55	W 104 8 58.82
	14200.00	90.00	179.94	7830.00	4616.00	6921.53	-6897.34	-580.97	0.00	377574.27	556910.08	N 32 2 16.56	W 104 8 58.83
	14300.00	90.00	179.94	7830.00	4616.00	7021.24	-6997.34	-580.87	0.00	377474.28	556910.18	N 32 2 15.57	W 104 8 58.83
	14400.00	90.00	179.94	7830.00	4616.00	7120.94	-7097.34	-580.77	0.00	377374.29	556910.28	N 32 2 14.58	W 104 8 58.83
	14500.00	90.00	179.94	7830.00	4616.00	7220.65	-7197.34	-580.67	0.00	377274.30	556910.38	N 32 2 13.59	W 104 8 58.83
	14600.00	90.00	179.94	7830.00	4616.00	7320.35	-7297.34	-580.57	0.00	377174.31	556910.48	N 32 2 12.60	W 104 8 58.83
	14700.00	90.00	179.94	7830.00	4616.00	7420.06	-7397.34	-580.47	0.00	377074.31	556910.59	N 32 2 11.61	W 104 8 58.83
	14800.00	90.00	179.94	7830.00	4616.00	7519.76	-7497.34	-580.36	0.00	376974.32	556910.69	N 32 2 10.62	W 104 8 58.83
	14900.00	90.00	179.94	7830.00	4616.00	7619.47	-7597.34	-580.26	0.00	376874.33	556910.79	N 32 2 9.63	W 104 8 58.83
Cacl LTP	14951.91	90.00	179.94	7830.00	4616.00	7671.23	-7649.26	-580.21	0.00	376822.42	556910.84	N 32 2 9.12	W 104 8 58.83

Survey Type: *Non-Def Plan*

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	25.000	1/100.000	30.000	30.000		NAL_MWD_HDGM-Depth Only	Original Borehole / Chevron HH SO 12 FED COM 2H Rev0 MMC 24Mar16
	1	25.000	14951.913	1/100.000	30.000	30.000		NAL_MWD_HDGM	Original Borehole / Chevron HH SO 12 FED COM 2H Rev0 MMC

BLOWOUT PREVENTOR SCHEMATIC

Minimum Requirements

OPERATION : Intermediate and Production Hole Sections

Minimum System Pressure Rating : **5,000 psi**

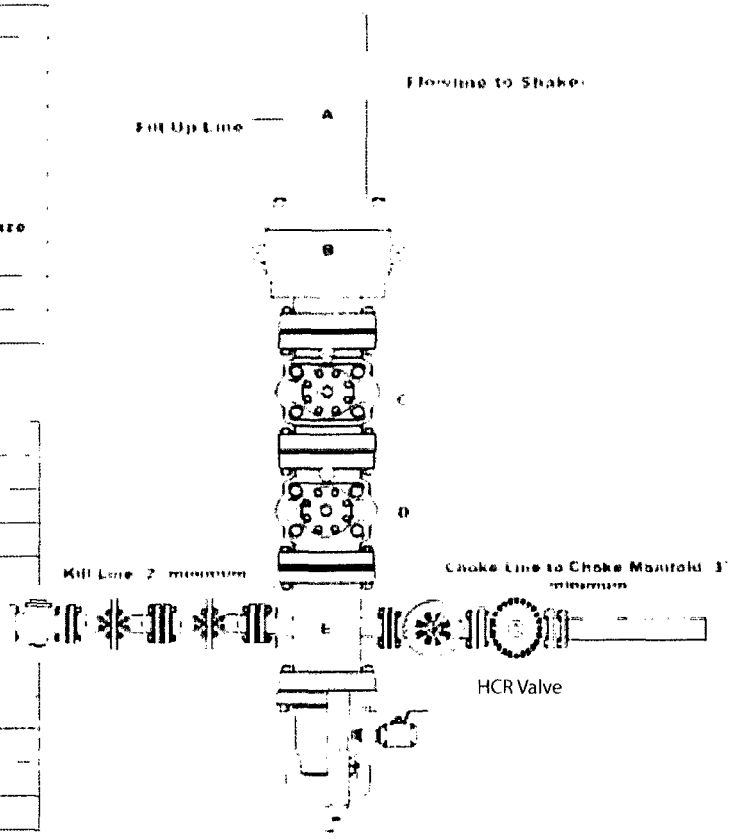
	SIZE	PRESSURE	DESCRIPTION
A		N A	Bell Nipple
B	13 5 8	5,000 psi	Annular
C	13 5 8	5,000 psi	Pipe Ram
D	13 5 8	5,000 psi	Blind Ram
E	13 5 8	5,000 psi	Mud Cross
F			
[illegible]		As required for each hole size	
[illegible]			
B [illegible]		13 5 8" 5K x 11" 5K	
A [illegible]		13 3 8" SOW x 13-5 8" 5K	

Kill Line

SIZE	PRESSURE	DESCRIPTION
2"	5,000 psi	Gate Valve
2"	5,000 psi	Gate Valve
2"	5,000 psi	Check Valve

Choke Line

SIZE	PRESSURE	DESCRIPTION
3"	5,000 psi	Gate Valve
3"	5,000 psi	HCR Valve



Installation Checklist

The following item must be verified and checked off prior to pressure testing of BOP equipment

- ☐ **The installed BOP equipment meets at least the minimum requirements (rating, type, size, configuration) as shown on this schematic. Components may be substituted for equivalent equipment rated to higher pressures. Additional components may be put into place as long as they meet or exceed the minimum pressure rating of the system.**
- ☐ **All valves on the kill line and choke line will be full opening and will allow straight though flow.**
- ☐ ***The kill line and choke line will be straight unless turns use tee blocks or are targeted with running tees,* and will be anchored to prevent whip and reduce vibration.**
- ☐ **Manual (hand wheels) or automatic locking devices will be installed on all ram preventers. Hand wheels will also be installed on all manual valves on the choke line and kill line.**
- ☐ **A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will remain open unless accumulator is inoperative.**
- ☐ **Upper kelly cock valve with handle will be available on rig floor along with safety valve and subs to fit all drill string connections in use.**

After Installation Checklist is complete, fill out the information below and email to Superintendent and Drilling Engineer

Wellname:

Representative: _____ _____

Date: _____

CHOKE MANIFOLD SCHEMATIC

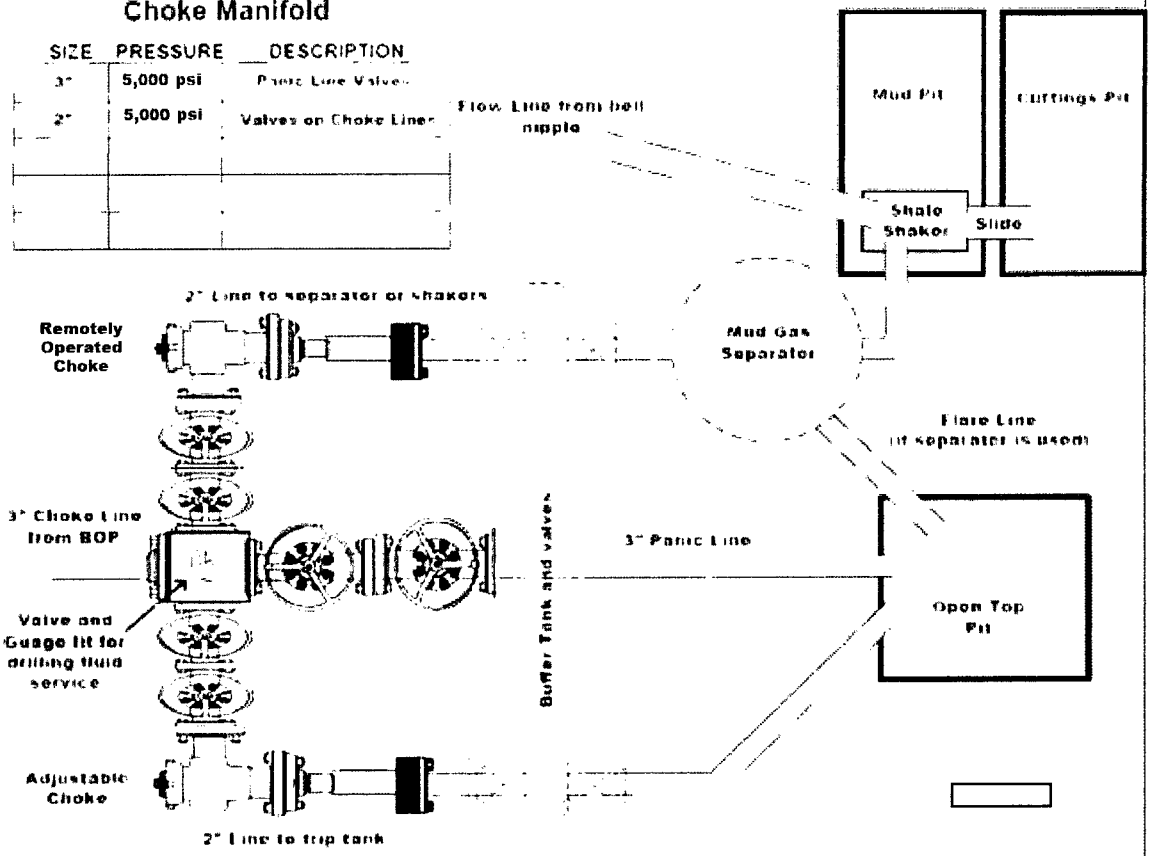
Minimum Requirements

OPERATION : Intermediate and Production Hole Sections

Minimum System Pressure Rating : **5,000 psi**

Choke Manifold

SIZE	PRESSURE	DESCRIPTION
3"	5,000 psi	Panic Line Valves
2"	5,000 psi	Valves on Choke Lines



Installation Checklist

The following items must be verified and checked off prior to pressure testing of BOP equipment

- ☐ The installed BOP equipment meets at least the minimum requirements (rating, type, size, configuration) as shown on this schematic. Components may be substituted for equivalent equipment rated to higher pressures. Additional components may be put into place as long as they meet or exceed the minimum pressure rating of the system.
- ☐ Adjustable Chokes may be Remotely Operated but will have backup hand pump for hydraulic actuation in case of loss of rig air pressure or power.
- ☐ Flare and Panic lines will terminate a minimum of 150' from the wellhead. These lines will terminate at a location as per approved APD.
- ☐ The choke line, kill line, and choke manifold lines will be straight unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and reduce vibration. This excludes the line between mud gas separator and shale shaker.
- ☐ All valves (except chokes) on choke line, kill line, and choke manifold will be full opening and will allow straight through flow. This excludes any valves between mud gas separator and shale shakers.
- ☐ All manual valves will have hand wheels installed.
- ☐ If used, flare system will have effective method for ignition
- ☐ All connections will be flanged, welded, or clamped (no threaded connections like hammer unions)
- ☐ If buffer tank is used, a valve will be used on all lines at any entry or exit point to or from the buffer tank.

After Installation Checklist is complete, fill out the information below and email to Superintendent and Drilling Engineer

Wellname:

Representative:

Date: _____

BOPE Testing

Minimum Requirements

Closing Unit and Accumulator Checklist

The following item must be performed, verified, and checked off at least once per well prior to low high pressure testing of BOP equipment. This must be repeated after 6 months on the same well.

☐ Precharge pressure for each accumulator bottle must fall within the range below. Bottles may be further charged with nitrogen gas only. Tested precharge pressures must be recorded for each individual bottle and kept on location through the end of the well. Test will be conducted prior to connecting unit to BOP stack.

Check one that applies	Accumulator working pressure rating	Minimum acceptable operating pressure	Desired precharge pressure	Maximum acceptable precharge pressure	Minimum acceptable precharge pressure
☐	1500 psi	1500 psi	750 psi	800 psi	700 psi
☐	2000 psi	2000 psi	1000 psi	1100 psi	900 psi
☐	3000 psi	3000 psi	1000 psi	1100 psi	900 psi

☐ Accumulator will have sufficient capacity to open the hydraulically-controlled choke line valve (if used), close all rams, close the annular preventer, and retain a minimum of 200 psi above the maximum acceptable precharge pressure (see table above) on the closing manifold without the use of the closing pumps. This test will be performed with test pressure recorded and kept on location through the end of the well.

☐ Accumulator fluid reservoir will be double the usable fluid volume of the accumulator system capacity. Fluid level will be maintained at manufacturer's recommendations. Usable fluid volume will be recorded. Reservoir capacity will be recorded. Reservoir fluid level will be recorded along with manufacturer's recommendation. All will be kept on location through the end of the well.

☐ Closing unit system will have two independent power sources (not counting accumulator bottles) to close the preventers.

☐ Power for the closing unit pumps will be available to the unit at all times so that the pumps will automatically start when the closing valve manifold pressure decreases to the pre-set level. It is recommended to check that air line to accumulator pump is "ON" during each tour change.

☐ With accumulator bottles isolated, closing unit will be capable of opening the hydraulically-operated choke line valve (if used) plus close the annular preventer on the smallest size drill pipe within 2 minutes and obtain a minimum of 200 psi above maximum acceptable precharge pressure (see table above) on the closing manifold. Test pressure and closing time will be recorded and kept on location through the end of the well.

☐ Master controls for the BOPE system will be located at the accumulator and will be capable of opening and closing all preventer and the choke line valve (if used).

☐ Remote controls for the BOPE system will be readily accessible (clear path) to the driller and located on the rig floor (not in the dog house). Remote controls will be capable of closing all preventers.

☐ Record accumulator tests in drilling reports and IADC sheet.

BOPE Test Checklist

The following item must be checked off prior to beginning test

BLM will be given at least 4 hour notice prior to beginning BOPE testing

☐ Valve on casing head below test plug will be open.

☐ Test will be performed using clear water.

The following item must be performed during the BOPE testing and then checked off

☐ BOPE will be pressure tested when initially installed, whenever any seal subject to test pressure is broken, following related repairs, and at a minimum of 30 days intervals. Test pressure and times will be recorded by a 3rd party on a test chart and kept on location through the end of the well.

☐ Test plug will be used.

☐ Ram type preventer and all related well control equipment will be tested to 250 psi (low) and 5,000 psi (high).

☐ Annular type preventer will be tested to 250 psi (low) and 3,500 psi (high).

☐ Valves will be tested from the working pressure side with all down stream valves open. The check valve will be held open to test the kill line valve(s).

☐ Each pressure test will be held for 10 minutes with no allowable leak off.

☐ Master controls and remote controls to the closing unit (accumulator) must be function tested as part of the BOP testing.

☐ Record BOP tests and pressures in drilling reports and IADC sheet.

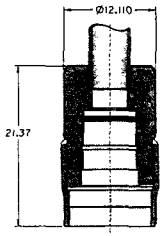
After installation Checklist is complete, fill out the information below and email to Superintendent and Drilling Engineer along with any all BOP and accumulator test charts and reports from 3rd parties.

Wellname:

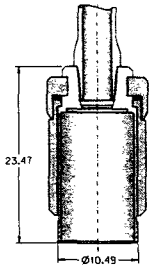
Representative: _____

Date:

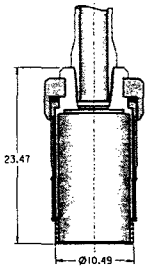
FMC Technologies



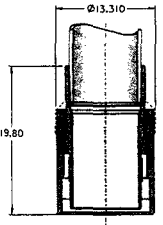
CASING HANGER R&R TOOL
9,750-4NA-2G-LH IND BTM X 9.625 LC
P1000157568



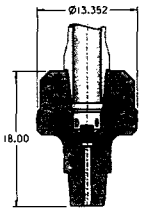
PACKOFF INSTALLATION TOOL,
F/ 13 5/8 UH-2 PACKOFF
P1000154374



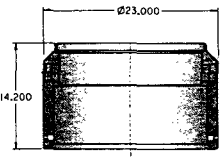
PACKOFF RETRIEVAL TOOL,
F/ 13 5/8 UH-2 PACKOFF
P1000154374



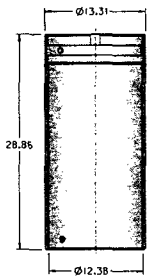
CASING HANGER R&R TOOL
P1000115382



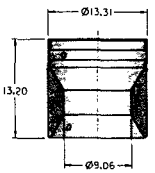
BOP TEST PLUG
P4000029902



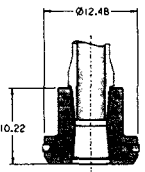
RISER ASSY, DIVERTER, 20 SQ BTM
P1172073



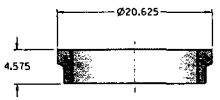
WEAR BUSHING (BOWL PROTECTOR)
P1000153633



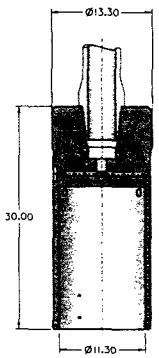
SHORT BOWL PROTECTOR
P1000153630



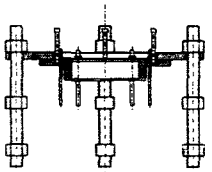
BOWL PROTECTOR R&R TOOL
48-291-312



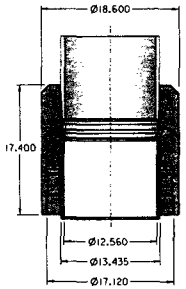
SWIVEL/ROTATING HUB
P1000101641



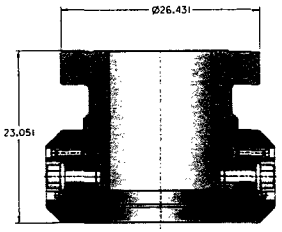
WASH TOOL
13.387 X 4 1/2 IF
P1000115671



INSTALLATION / REMOVAL TOOL ASSY,
PUSHER PLATE AND T-MANDREL
P1000136034



CASING HEAD RUNNING TOOL ASSY
P1000118117

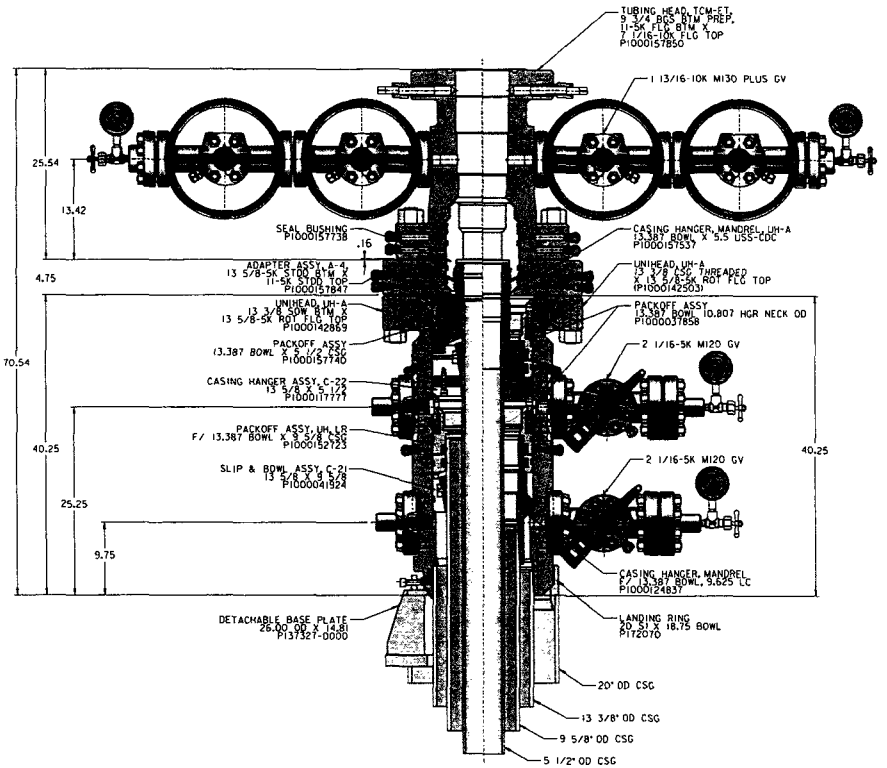


SPEEDLOC II
P1171126-0000

BPV RUNNING TOOL
P178648

BPV REMOVAL TOOL
P410215

BPV, TYPE H
P126944-0000



CHEVRON
ODESSA
20 X 13 3/8 X 9 5/8 X 5 1/2

QUOTE LAYOUT
F19942
REF: DM100147640-2
DM100146407-2
DM100213533

REVISIONS		DESCRIPTION
A	06-18-15	

SURFACE WELLHEAD LAYOUT, UNIHEAD, UH-2, STC THREAD, CHEVRON, ODESSA

DRAWN BY	O. BUI	06-18-15
DRAFTING REVIEW	Z. MARQUEZ	06-18-15
ENGINEERING REVIEW	L. MELO	06-18-15
APPROVED BY	K. TAHA	06-18-15

FMC Technologies

DRAWING NUMBER
DM100220685

Delaware Basin
Changes to APD for Federal Well

Chevron

CHEVRON CONTACT:

RODERICK MILLIGAN
DRILLING ENGINEER
1400 SMITH ST.
HOUSTON, TX 77002

DESK: HOU140/43-130
CELL: 281-413-9794
EMAIL: RODERICK.MILLIGAN@CHEVRON.COM

Summary of Changes to MPD Submission

BOP Equipment – CoFlex Hose (Section 3 of 9 Point Drilling Plan in MPD)

BOP Equipment – CoFlex Hose

Summary: Variance to use a CoFlex hose between BOP and choke manifold not requested in original submittal.

As Defined in MPD:	As Planned on Well:
Variance to use CoFlex hose not requested.	Chevron requests a variance to use a CoFlex hose with a metal protective covering that will be utilized between the BOP and Choke manifold. Please refer to the attached testing and specification documents.

Continental

ContiTech

Hose Data Sheet

CRI Order No.	538332
Customer	ContiTech Oil & Marine Corp.
Customer Order No	4500412631 CBC544771, CBC544769, CBC544767, CBC544763, CBC544768, CBC544745, CBC544744, CBC544746
Item No.	1
Hose Type	Flexible Hose
Standard	**API SPEC 16 C**
Inside dia in inches	3
Length	45 ft
Type of coupling one end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOURC/W BX155 ST/ST INLAID R.GR.
Type of coupling other end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOUR C/W BX155 ST/ST INLAID R.GR.
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St.steel outer wrap
Internal stripwound tube	No
Lining	OIL + GAS RESISTANT SOUR
Safety clamp	Yes
Lifting collar	Yes
Element C	Yes
Safety chain	Yes
Safety wire rope	No
Max.design temperature [°C]	100
Min.design temperature [°C]	-20
Min. Bend Radius operating [m]	0,90
Min. Bend Radius storage [m]	0,90
Electrical continuity	The Hose is electrically continuous
Type of packing	WOODEN CRATE ISPM-15

H_2S Preparedness and Contingency Plan Summary

Hayhurst Eddy County, New Mexico

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_2S
2. Health hazards of H_2S
3. Personal protective equipment
4. Information regarding potential sources of H_2S
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_2S 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_2S safe work practice procedures;
2. Emergency contingency plan procedures;
3. Methods to detect the presence or release of H_2S (e.g., alarms, monitoring equipment), including hands-on training with direct reading and personal monitoring H_2S equipment.
4. Basic overview of respiratory protective equipment suitable for use in H_2S environments. Note: Employees who work at sites that participate in the Chevron Respirator User program will require separate respirator training as required by the MCBU Respiratory Protection Program;
5. Basic overview of emergency rescue techniques, first aid, CPR and medical evaluation procedures. Employees who may be required to perform "standby" duties are required to receive additional first aid and CPR training, which is not covered in the Advanced Level H_2S 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_2S Training Certification

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

Briefing Area

A minimum of two briefing areas will be established in locations that at least one area will be up-wind 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_2S Equipment

Respiratory Protection

a) Six 30 minute SCBAs – 2 at each briefing area and 2 in the Safety Trailer.

b) Eight 5 minute EBAs – 5 in the dog house at the rig floor, 1 at the accumulator, 1 at the shale shakers and 1 at the mud pits.

Visual Warning System

a) One color code sign, displaying all possible conditions, will be placed at the entrance to the location with a flag displaying the current condition.

b) Two windsocks will be on location, one on the dog house and one on the Drill Site Manager's Trailer.

H_2S Detection and Monitoring System

a) H_2S 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.

Well Control Equipment

a) Flare Line 150' from wellhead with igniter.

b) Choke manifold with a remotely operated choke.

c) Mud / gas separator

Mud Program

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

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

Public Safety - Emergency Assistance

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

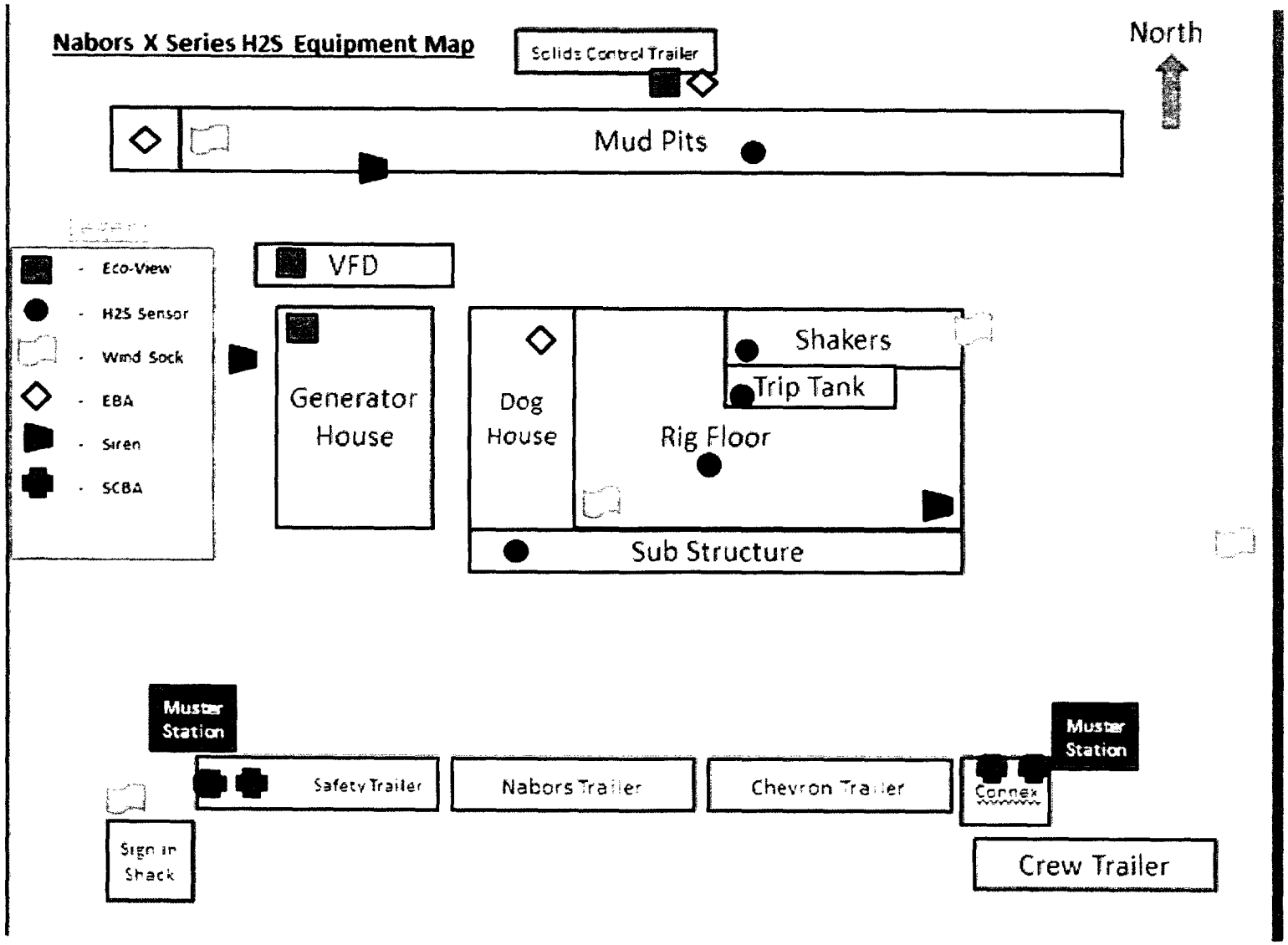
Chevron MCBU D&C Emergency Notifications

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

	Name	Title	Office Number	Cell Phone
1.	Roderick Milligan	Drilling Engineer	(713) 372-2011	(281) 413-9794
2.	Josh Kirk	Superintendent	(713) 372-2505	(832) 374-7883
5.	Ike Chukwumaeze	Drilling Manager	(713) 372-7591	(281) 615-0701
6.	Scott Nash	Operations Manager	(713) 372-5747	(281) 814-9713
7.	Belle Davis	D&C HES	(432)687-7477	(432)234-8713

H_2S Preparedness and Contingency Plan Summary

Chevron



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HH SO 12 FED COM 2H
NMNM 116028 (SHL), NMNM 120350
SECTION 12, T26S-R27E SECTION 13, T26S, R33E
SHL 2660' FSL & 1294' FWL BHL 180' FSL & 660' FWL

APD Surface Use Plan of Operations

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.
- Driving Directions – From Malaga, New Mexico. The location is approximately 15 miles from the nearest town, which is Malaga, New Mexico. From Malaga, proceed South on Highway 285 approximately 11.25 miles and turn right (West) onto White City Rd and go approximately 4 miles on White City Rd. The proposed access to the well location is just East of the large oil tank facility.

New or Reconstructed Access Roads - Survey plat (Exhibit 2)

- There will be 3,519' of new road construction for this proposal.
- 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: None suggestion
- 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

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Location of Existing Wells (Exhibit 3)

- 1-Mile radius map is attached

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

- Facilities: A facility location is proposed in the N2 of Sec. 12, T26S-R27E where oil and gas sales will take place.
  - The facility is proposed in Sec. 12, T26S-R27E
  - A 500' x 700' facility pad is proposed
  - 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: Flowlines will be laid approximately 2,561' from well south to lease road then west, then north to production facility at proposed battery location.
  - A ROW will be applied for through the BLM.
  - All construction activity will be confined to the approved ROW.
  - Pipeline will run parallel to the road and will stay within approved ROW.
- Power lines: Approximately 1,861' of new powerlines are proposed.

Location and Types of Water Supply (Exhibit 5)

- Existing pond in Section 10, T26S-R27E will be utilized for fresh water.
- Fresh water will be obtained from a private water source.
- A temporary 10" expanding pipe transfer line will run along lease roads and White City rd. then along proposed access road approx. 14,341' from frac pond.
  - Fresh water line will run parallel to road and will stay within 10' of access road.
  - A BLM ROW will be obtained for the water transfer line.

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 (Exhibit 6a)
    - Exterior well pad dimensions are 425' x 330'
    - Interior well pad dimensions from point of entry (well head) of the westernmost well are N-150', S-180', E-205', W-220'. Total disturbance area needed for construction of well pad will be 3.2 acres
    - Topsoil placement is on the south where interim reclamation is planned to be completed upon completion of well and evaluation of best management practices.
    - Cut and fill: see exhibit.
- Rig Layout (Exhibit 6b)

Plans for Surface Reclamation

Reclamation Objectives

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- 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.
- 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

- BLM Surface
  - Surface Tenant – Forehand Ranches (Mark Forehand)

- **Nearest Post Office:** Malaga Post Office; 15.25 Miles north

Other Information

- On-site performed by BLM NRS: Paul Murphy 3/1/2016
- Cultural report attached: **Yes** 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: Low relief undulating hills, 0-3% slopes
- Soil: Reeves-Reagan Loams
- Vegetation: Vegetation present in surrounding area includes mesquite, creosote, cholla, sand sage, and various forbs and grasses

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- Wildlife: No wildlife observed, but it is likely that deer, rabbits, coyotes, and rodents pass through the area.
- Surface Water: No surface water concerns.
- Cave Karst: Low Karst area with no caves or visual signs of caves found.
- 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:
Kevin Dickerson
kevin.dickerson@chevron.com
M- 432-250-4489

Chevron Functional Contacts

Project Manager Name: Sean Cheben Address: 1400 Smith Street Houston, TX 77002 Phone: (713) 372-9382 Email: sean.cheben@chevron.com	**Drilling Engineer** Name: Roderick Milligan Address: 1400 Smith Street Houston, TX 77002 Phone: (713) 372-2011 Email: RoderickMilligan@chevron.com
Surface Land Representative Name: Kevin Dickerson Address: 15 Smith Road Midland Texas 79705 Phone: (432) 687-7104 Email: Kevin.Dickerson@chevron.com	**Facility Lead** Name: Michelle Hranitzky Address: 1400 Smith Street Houston, TX 77002 Phone: (432) 687-7001 Email: Michelle.Hranitzky@chevron.com
Geologist Name: Jeff Fabre Address: 1400 Smith Street Houston, TX 77002 Phone: (713) 372-0523 Email: JeffreyFabre@chevron.com	**Regulatory Specialist** Denise Pinkerton Address: 15 Smith Road, Midland, TX 79705 Office: (432) 687-7375 Email: leakejd@chevron.com

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EXHIBITS:

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)

Exhibit 5 -- Survey Plat: Infrastructure: roads, pipelines, power lines, frac pond

Exhibit 6 -- Rig Layout: Well Site Layout Map / Diagram

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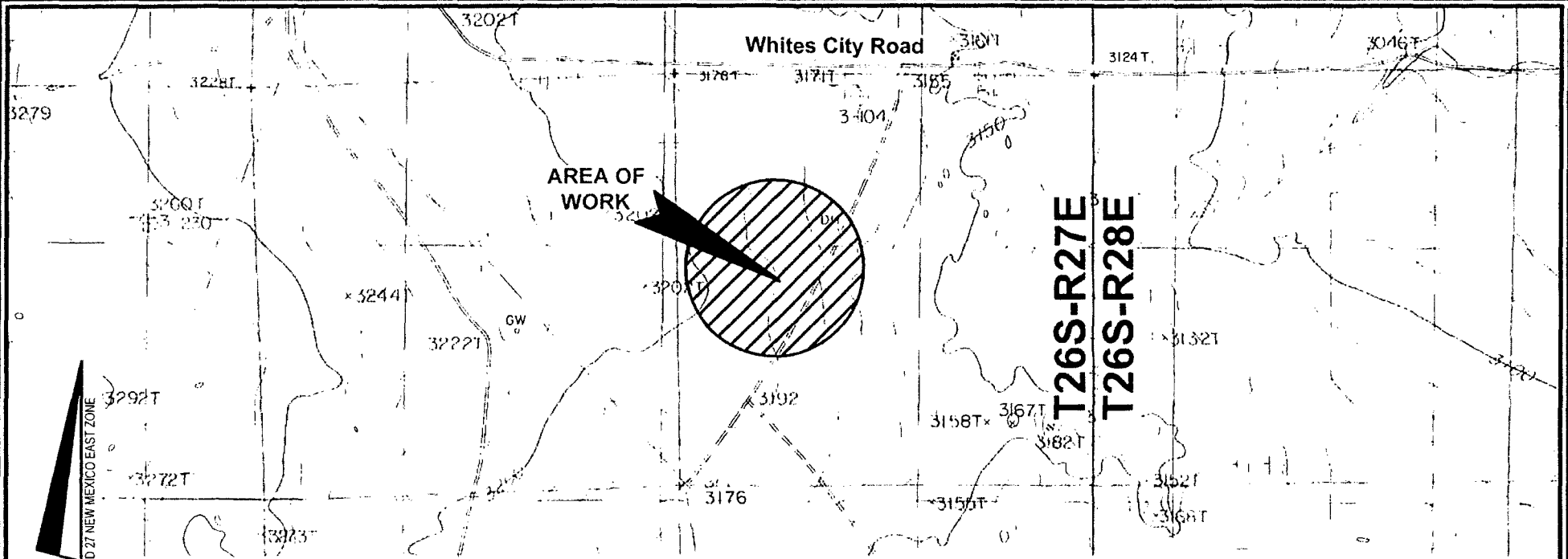

VICINITY MAP

2,000' 0 1,000' 2,000'

Scale: 1"=2,000'

DISCLAIMER: At this time, C H. Fenstermaker & Associates, L L C has not performed nor was asked to perform any type of engineering, hydrological modeling, flood plain, or "No Rise" certification analyses, including but not limited to determining whether the project will impact flood hazards in connection with federal/FEMA, state, and/or local laws, ordinances and regulations. Accordingly, Fenstermaker makes no warranty or representation of any kind as to the foregoing issues, and persons or entities using this information shall do so at their own risk

NOTE:

The design pad elevation recommendation is based solely on a cut and fill (1:1 ratio) balance of the pad and does not include material required for the access roads. A detailed soil test and slope stability analysis shall be performed prior to construction to ensure proper compaction and working performance of the pad under the anticipated loadings. This material balance sheet does not constitute a foundation design and Fenstermaker makes no warranty to the structural integrity of the site layout as shown. Fenstermaker also makes no recommendation or warranty about the layout relative to flood hazards, *erosion control, or soil stability issues*

NOTE:

Many states maintain information centers that establish links between those who dig (excavators) and those who own and operate underground facilities (operators). It is advisable and in most states, law, for the *contractor to contact the center for assistance in locating and marking* underground utilities. For guidance: New Mexico One Call www.nmonecall.org

NOTE:

Please be advised, that while reasonable efforts are made to locate and verify pipelines and anomalies using our standard pipeline locating equipment, it is impossible to be 100 % effective. As such, we advise using caution when performing work as there is a possibility that pipelines and other hazards, such as fiber optic cables, PVC pipelines, etc. may exist undetected on site.

FOR THE EXCLUSIVE USE OF CHEVRON U.S.A INC.

I, Robert L Lastrapes, Registered Professional Land Surveyor, do hereby state this plat is true and correct to the best of my knowledge.

ROBERT L. LASTRAPES NEW MEXICO 23006

5-9-2016

Robert L. Lastrapes
Registration No. 23006

FENSTERMAKER
C. H. Fenstermaker & Associates, L.L.C.
135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax 337-232-3299
www.fenstermaker.com

DETAIL PAGE 3 OF 3

CHEVRON U.S.A. INC.

PROPOSED PAD CUT & FILL
HH SO 12 FED COM NO. 2H WELL
SECTION 12, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: BOR	REVISIONS		
PROJ. MGR.. GDG	No.	DATE:	REVISED BY:
DATE: MAY 05. 2016	No.	DATE:	REVISED BY:

FILENAME: T:\2016\2163675\DWG\HH SO 12 FED COM 2H CUT_FILL SUP.dwg

Exhibit 2-5

R 27 E

HH SO 12 FED COM NO. 2H WELL	
X=	557,491 NAD 27
Y=	384,471
LAT	32.056891
LONG.	104.147760
X=	598,675 NAD83
Y=	384,528
LAT.	32.057013
LONG.	104.148251
ELEVATION +3189' NAVD 88	

NW ARCH. AREA CORNER	
X=	557,183 NAD 27
Y=	384,756
NE ARCH. AREA CORNER	
X=	557,783 NAD 27
Y=	384,756
SE ARCH. AREA CORNER	
X=	557,784 NAD 27
Y=	384,156
SW ARCH. AREA CORNER	
X=	557,184 NAD 27
Y=	384,156
NW PAD CORNER	
X=	557,271 NAD 27
Y=	384,621
ELEVATION +3191' NAVD 88	
NE PAD CORNER	
X=	557,696 NAD 27
Y=	384,621
ELEVATION +3187' NAVD 88	
SE PAD CORNER	
X=	557,696 NAD 27
Y=	384,291
ELEVATION +3187' NAVD 88	
SW PAD CORNER	
X=	557,271 NAD 27
Y=	384,291
ELEVATION +3191' NAVD 88	

PROPOSED ARCHAEOLOGICAL AREA ±5.04 ACRES

HH SO 12 FED COM
No. 2H Well
2,657' FNL & 1,294' FWL

150'
220'
205'
330'
2'
180'
425'
600'
600'

PROPOSED PAD ±3.22 ACRES

T 26 S

NW/SW
State of New Mexico
(Proposed Pad ±1.07 Acres)

1

2

CENTERLINE PROPOSED ACCESS ROAD (1) TOTAL
14' X ±3,816.29'
±1.23 Acres
±231.29 Rods

FOR THE EXCLUSIVE USE OF
CHEVRON U.S.A. INC.
I, Robert L. Lastrapes, Registered Professional Land Surveyor, do hereby state this plat is true and correct to the best of my knowledge.

5.25.2016

Robert L. Lastrapes
Registration No. 23006

NAD 27 NEW MEXICO EAST ZONE

S 29° 49' 20" W 2,859.43'

Fnd. 2" Iron Pipe w/Cap at the SW Corner of Section 12

Sec. 12

Bureau of Land Management
(Proposed Access Road (1) ±3,721.19', ±225.53 Rods, ±1.20 Acres)
(Proposed Access Road (2) ±565.22', ±34.26 Rods, ±0.18 Acres)
(Proposed Pad ±2.15 Acres)

LEGEND

Centerline Proposed Access
Property Line

SURFACE USE PLAT

Scale: 1" = 200'

200' 0 100' 200'

CHEVRON U.S.A. INC.

PROPOSED PAD, ACCESS ROADS & FACILITY
HH SO 12 FED COM NO. 2H WELL
SECTIONS 1 & 12, T26S-R27E
EDDY COUNTY, NEW MEXICO

FENSTERMAKER
C H Fenstermaker & Associates, L L C.
135 Regency Sq Lafayette, LA 70508
Ph 337-237-2200 Fax 337-232-3299
www.fenstermaker.com

DRAWN BY: BOR	REVISIONS		
PROJ. MGR.: GDG	No. 1	DATE: 03/23/2016	REVISED BY: BOR
DATE: 03/04/2016	No. 2	DATE: 05/25/2016	REVISED BY: GDG
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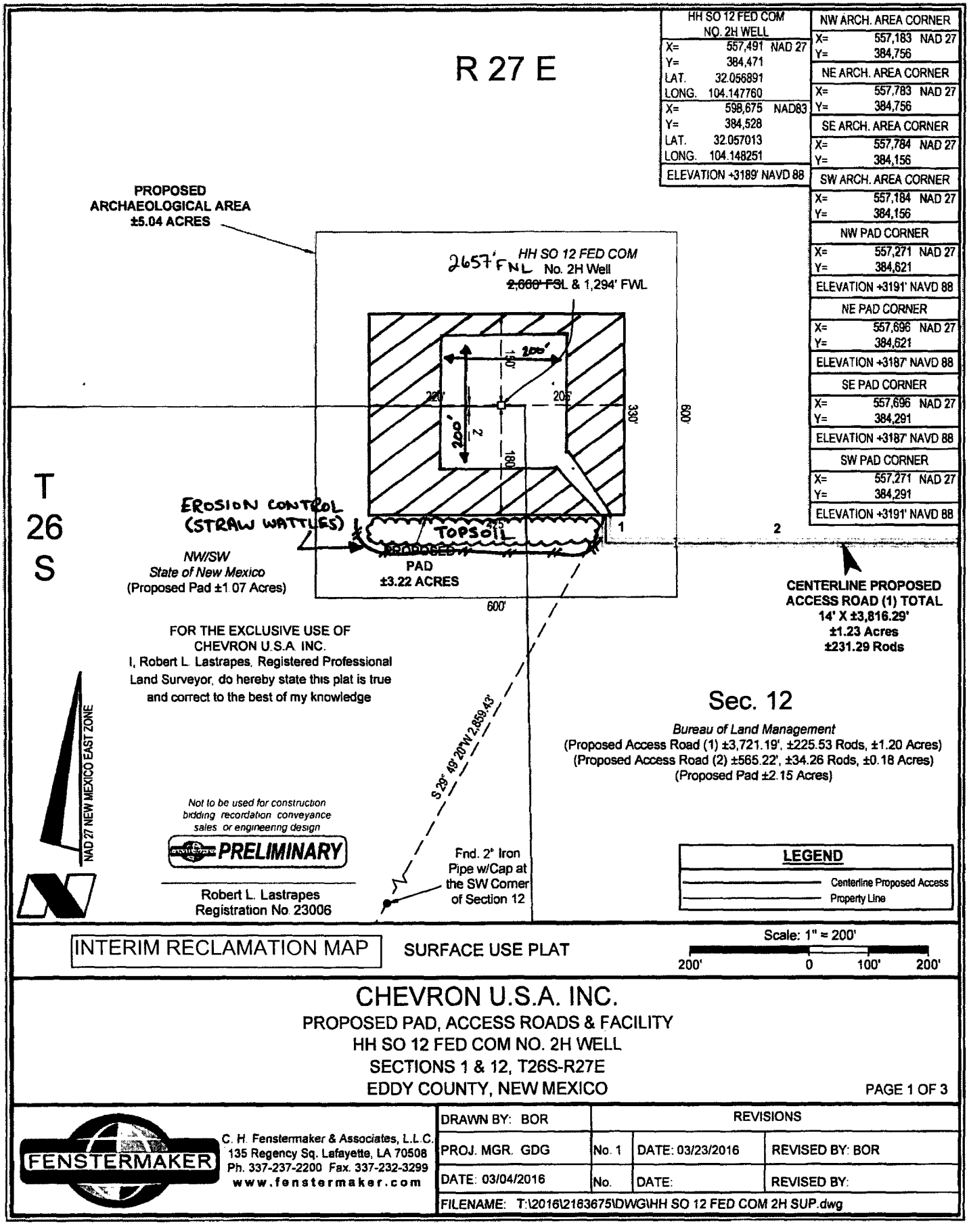

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NW ARCH. AREA CORNER	
X=	557,183 NAD 27
Y=	384,756
NE ARCH. AREA CORNER	
X=	557,783 NAD 27
Y=	384,756
SE ARCH. AREA CORNER	
X=	557,784 NAD 27
Y=	384,156
SW ARCH. AREA CORNER	
X=	557,184 NAD 27
Y=	384,156
NW PAD CORNER	
X=	557,271 NAD 27
Y=	384,621
ELEVATION +3191' NAVD 88	
NE PAD CORNER	
X=	557,696 NAD 27
Y=	384,621
ELEVATION +3187' NAVD 88	
SE PAD CORNER	
X=	557,696 NAD 27
Y=	384,291
ELEVATION +3187' NAVD 88	
SW PAD CORNER	
X=	557,271 NAD 27
Y=	384,291
ELEVATION +3191' NAVD 88	

INTERIM RECLAMATION MAP SURFACE USE PLAT

CHEVRON U.S.A. INC.

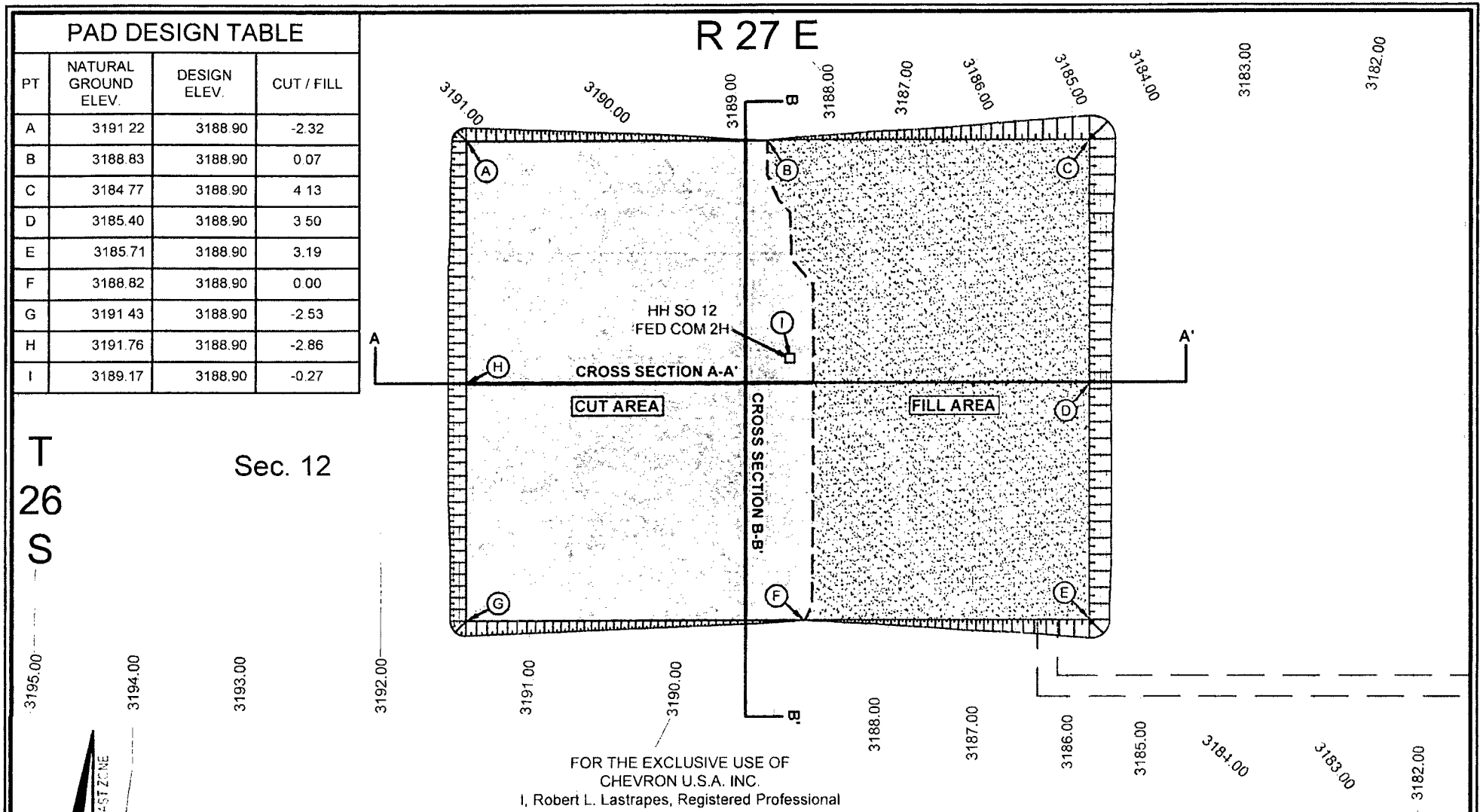
PROPOSED PAD, ACCESS ROADS & FACILITY
HH SO 12 FED COM NO. 2H WELL
SECTIONS 1 & 12, T26S-R27E
EDDY COUNTY, NEW MEXICO

FENSTERMAKER
C. H. Fenstermaker & Associates, L.L.C.
135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

DRAWN BY: BOR	REVISIONS		
PROJ. MGR. GDG	No. 1	DATE: 03/23/2016	REVISED BY: BOR
DATE: 03/04/2016	No.	DATE:	REVISED BY:
FILENAME: T:\2016\2163675\DWG\HH SO 12 FED COM 2H SUP.dwg			

PAD DESIGN TABLE

PT	NATURAL GROUND ELEV.	DESIGN ELEV.	CUT / FILL
A	3191 22	3188.90	-2.32
B	3188.83	3188.90	0 07
C	3184 77	3188.90	4 13
D	3185.40	3188.90	3 50
E	3185.71	3188.90	3.19
F	3188.82	3188.90	0 00
G	3191 43	3188.90	-2 53
H	3191.76	3188.90	-2.86
I	3189.17	3188.90	-0.27



CUT VOLUME = 4622 25 Cu. Yd
FILL VOLUME = 4624 18 Cu. Yd.
NET VOLUME = 1 93 Cu. Yd Fill

Scale: 1" = 100'

100' 0 50' 100'

FOR THE EXCLUSIVE USE OF
CHEVRON U.S.A. INC.
I, Robert L. Lastrapes, Registered Professional Land Surveyor, do hereby state this plat is true and correct to the best of my knowledge.

5-9-2016

Robert L. Lastrapes
Registration No. 23006

FENSTERMAKER
C. H. Fenstermaker & Associates, L.L.C.
135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

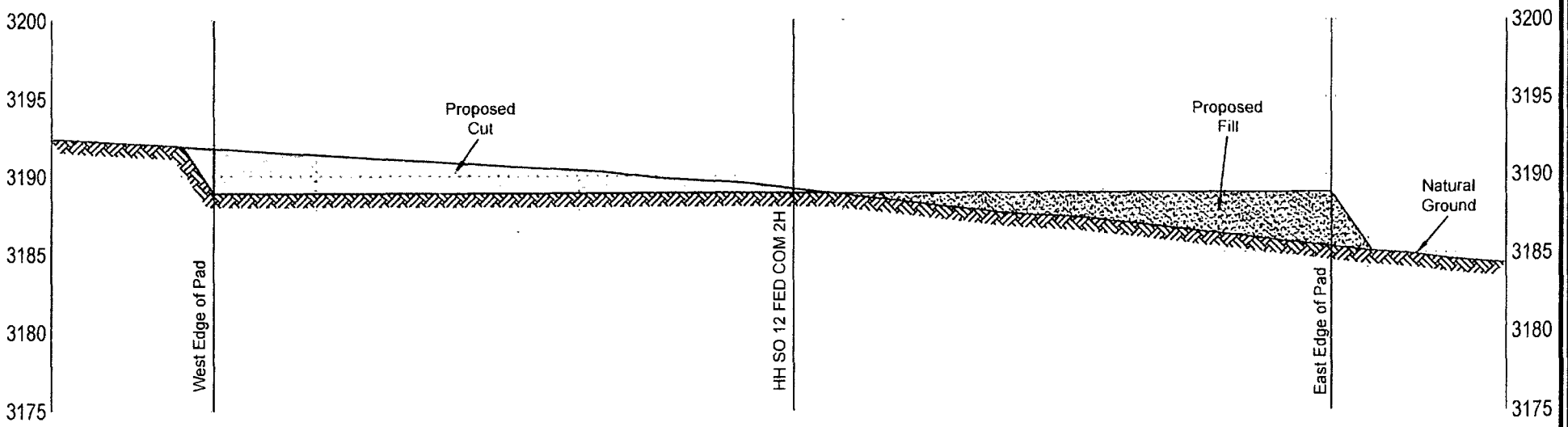
DETAIL PAGE 1 OF 3

CHEVRON U.S.A. INC.

PROPOSED PAD CUT & FILL
HH SO 12 FED COM NO. 2H WELL
SECTION 12, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: BOR	REVISIONS		
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:
DATE: MAY 06, 2016	No.	DATE:	REVISED BY:
FILENAME: T:\2016\2163675\DWG\HH SO 12 FED COM 2H CUT_FILL SUP.dwg			

CROSS SECTION A-A'
HORIZONTAL SCALE 1"=60'
VERTICAL SCALE 1"=10'



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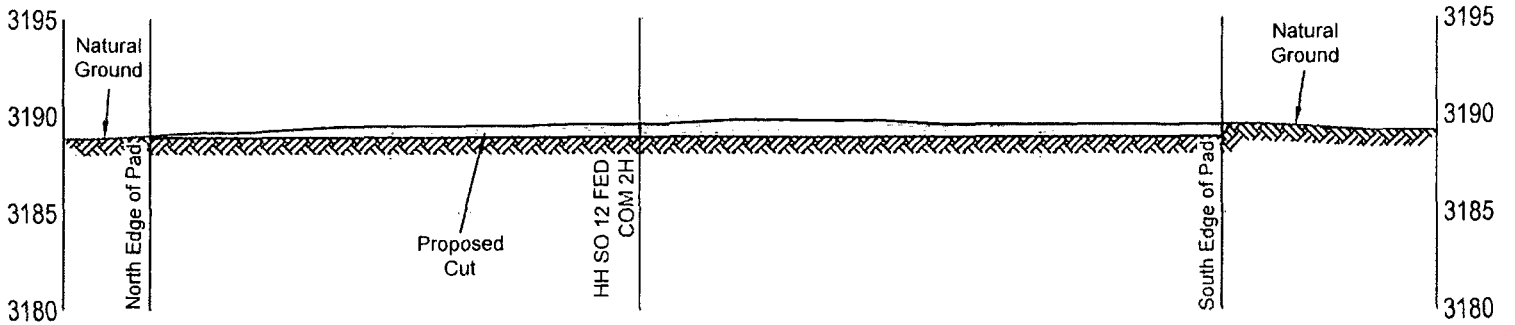
VERTICAL SCALE 1"=10'



DETAIL PAGE 2 OF 3

CHEVRON U.S.A. INC.

PROPOSED PAD CUT & FILL
HH SO 12 FED COM NO. 2H WELL
SECTION 12, T26S-R27E
EDDY COUNTY, NEW MEXICO

FOR THE EXCLUSIVE USE OF
CHEVRON U.S.A. INC.
I, Robert L. Lastrapes, Registered Professional Land Surveyor, do hereby state this plat is true and correct to the best of my knowledge.

ROBERT L. LASTRAPES
NEW MEXICO
23006
5-9-2016
PROFESSIONAL SURVEYOR

Robert L. Lastrapes
Registration No. 23006

FENSTERMAKER
C. H. Fenstermaker & Associates, L.L.C.
135 Regency Sq Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
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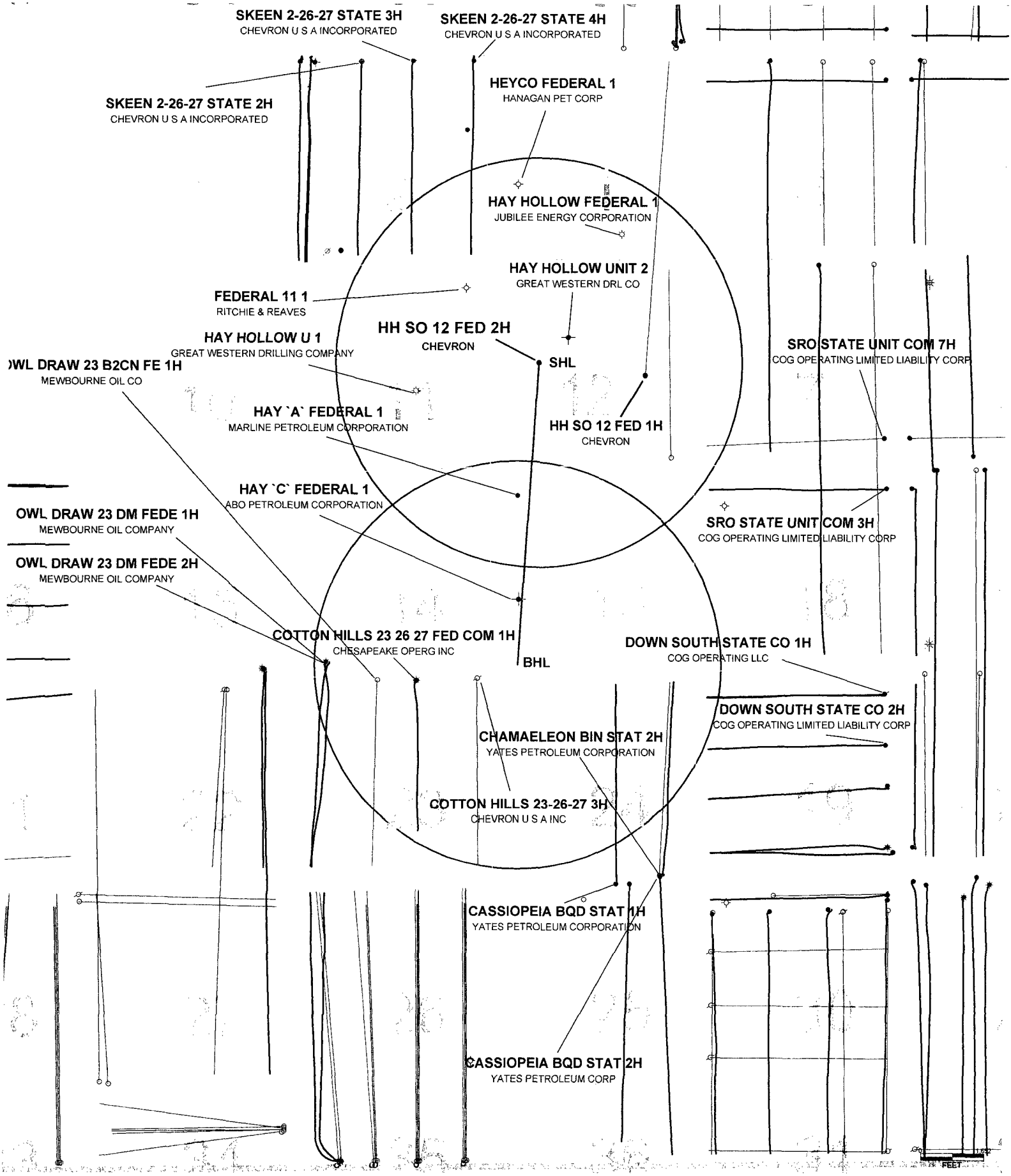
DRAWN BY: BOR	REVISIONS		
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:
DATE: MAY 06, 2016	No.	DATE:	REVISED BY:
FILENAME: T:\2016\2163675\DWG\HH SO 12 FED COM 2H CUT_FILL SUP.dwg			

EXHIBIT 3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CHEVRON U S A INCORPORATED
SKEEN 2-26-27 STATE 4H
CHEVRON U S A INCORPORATED
SKEEN 2-26-27 STATE 2H
CHEVRON U S A INCORPORATED
HEYCO FEDERAL 1
HANAGAN PET CORP
HAY HOLLOW FEDERAL 1
JUBILEE ENERGY CORPORATION
HAY HOLLOW UNIT 2
GREAT WESTERN DRL CO
FEDERAL 11 1
RITCHIE & REAVES
HH SO 12 FED 2H
CHEVRON
HAY HOLLOW U 1
GREAT WESTERN DRILLING COMPANY
SHL
SRO STATE UNIT COM 7H
COG OPERATING LIMITED LIABILITY CORP
)WL DRAW 23 B2CN FE 1H
MEWBOURNE OIL CO
HAY `A` FEDERAL 1
MARLINE PETROLEUM CORPORATION
HH SO 12 FED 1H
CHEVRON
HAY `C` FEDERAL 1
ABO PETROLEUM CORPORATION
OWL DRAW 23 DM FEDE 1H
MEWBOURNE OIL COMPANY
SRO STATE UNIT COM 3H
COG OPERATING LIMITED LIABILITY CORP
OWL DRAW 23 DM FEDE 2H
MEWBOURNE OIL COMPANY
COTTON HILLS 23 26 27 FED COM 1H
CHESAPEAKE OPERG INC
BHL
DOWN SOUTH STATE CO 1H
COG OPERATING LLC
DOWN SOUTH STATE CO 2H
COG OPERATING LIMITED LIABILITY CORP
CHAMAELEON BIN STAT 2H
YATES PETROLEUM CORPORATION
COTTON HILLS 23-26-27 3H
CHEVRON U S A INC
CASSIOPEIA BQD STAT 1H
YATES PETROLEUM CORPORATION
CASSIOPEIA BQD STAT 2H
YATES PETROLEUM CORP
FEET

EXHIBIT 4

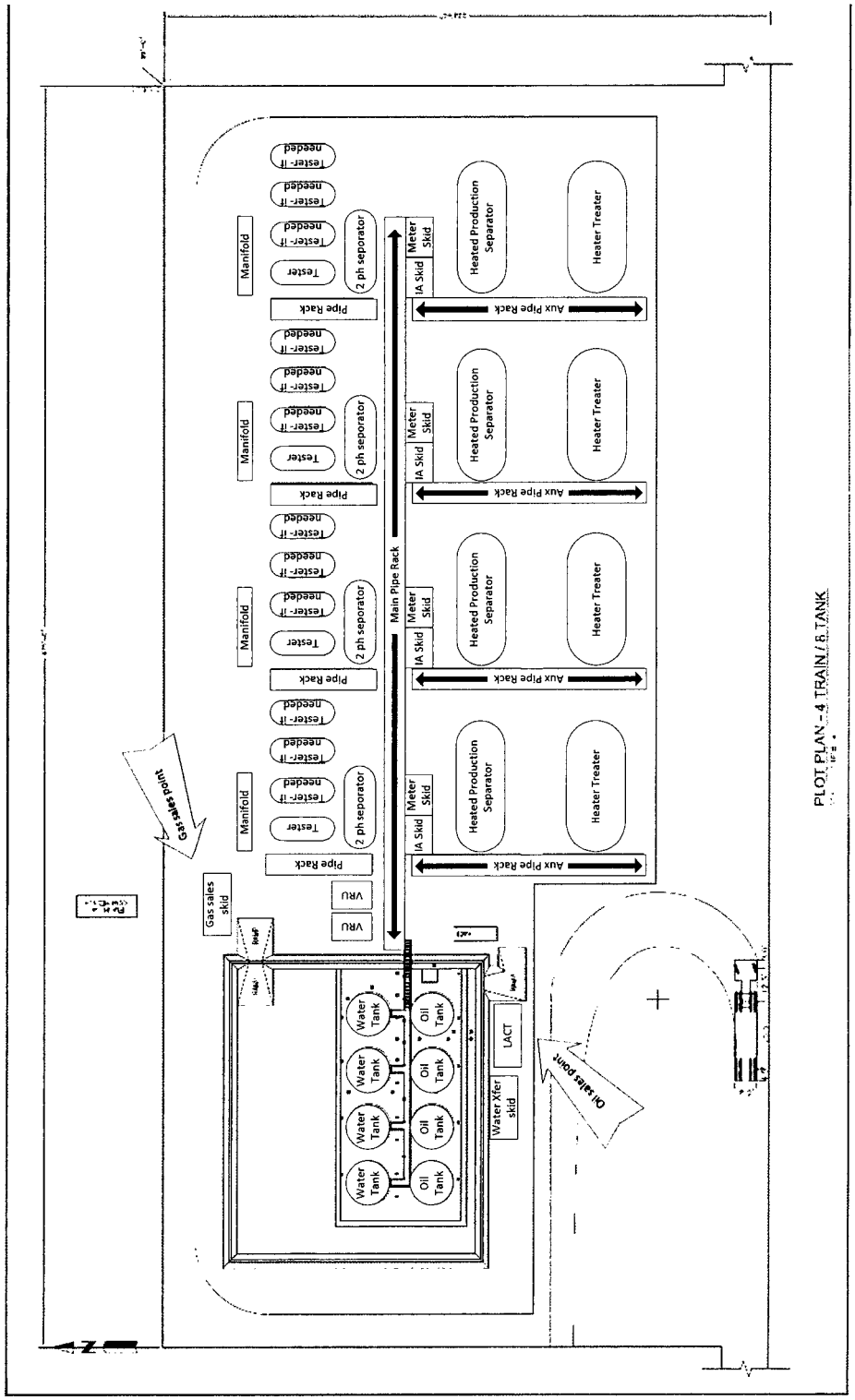
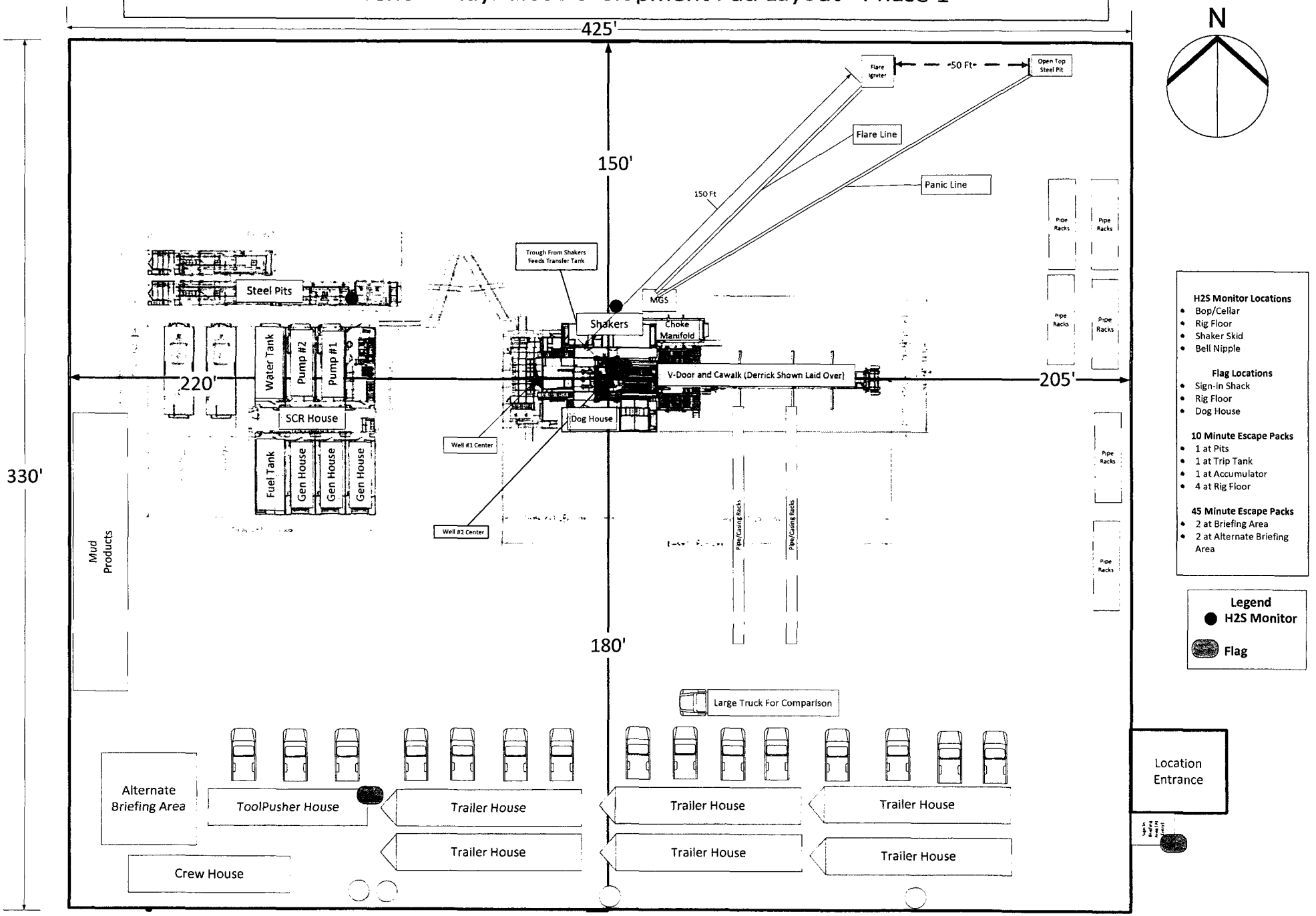
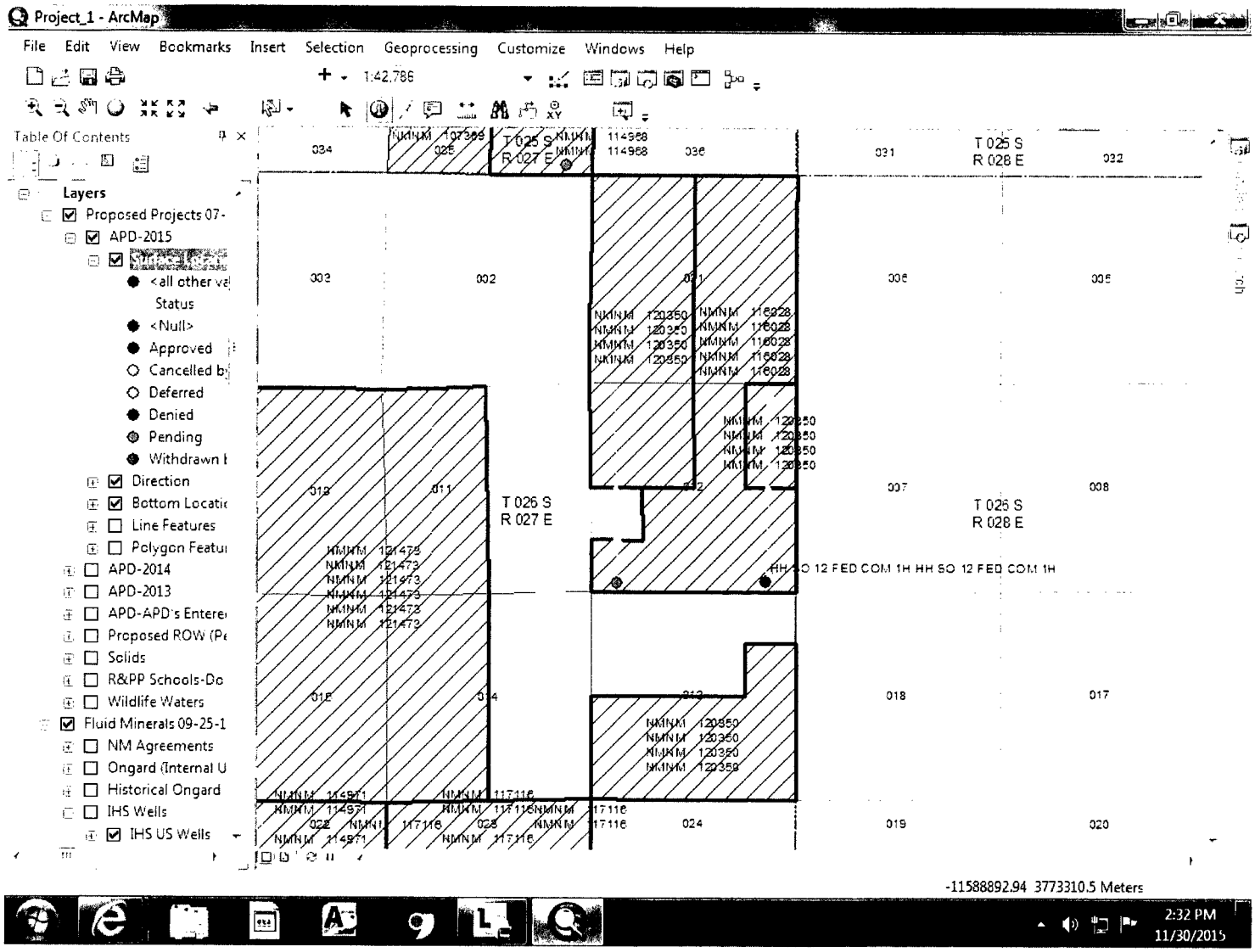

PLOT PLAN - 4 TRAIN / 8 TANK
Gas sales point
Oil sales point
Gas sales skid
VRU
VRU
Pipe Rack
Manifold
Tester
2 ph seporator
Tester- if needed
Main Pipe Rack
IA Skid
Meter Skid
Heated Production Separator
Heater Treater
Aux Pipe Rack
Water Tank
Oil Tank
Water Xfer skid
LACT

Exhibit 6

Generic Hayhurst Development Pad Layout - Phase 1

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APD-2015
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Approved
Cancelled b
Deferred
Denied
Pending
Withdrawn
Direction
Bottom Locatic
Line Features
Polygon Featur
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APD-2013
APD-APD's Entere
Proposed ROW (Pe
Solids
R&PP Schools-Do
Wildlife Waters
Fluid Minerals 09-25-1
NM Agreements
Ongard (Internal U
Historical Ongard
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T 026 S
R 028 E
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11/30/2015

2M116028

CHEVRON U.S.A. Inc
HH SO 12 FED COM 2H
NMNM 116028 (SHL), NMNM 120350
SECTION 12, T26S-R27E SECTION 13, T26S, R33E
SHL 2660' FSL & 1294' FWL BHL 180' FSL & 660' FWL

Chevron Representatives

Primary point of contact:
Kevin Dickerson
kevin.dickerson@chevron.com
M- 432-250-4489

Chevron Functional Contacts

Project Manager Name: Sean Cheben Address: 1400 Smith Street Houston, TX 77002 Phone: (713) 372-9382 Email: sean.cheben@chevron.com	**Drilling Engineer** Name: Roderick Milligan Address: 1400 Smith Street Houston, TX 77002 Phone: (713) 372-2011 Email: RoderickMilligan@chevron.com
Surface Land Representative Name: Kevin Dickerson Address: 15 Smith Road Midland Texas 79705 Phone: (432) 687-7104 Email: Kevin.Dickerson@chevron.com	**Facility Lead** Name: Michelle Hranitzky Address: 1400 Smith Street Houston, TX 77002 Phone: (432) 687-7001 Email: Michelle.Hranitzky@chevron.com
Geologist Name: Jeff Fabre Address: 1400 Smith Street Houston, TX 77002 Phone: (713) 372-0523 Email: JeffreyFabre@chevron.com	**Regulatory Specialist** Cindy Herrera-Murillo Address:1616 W. Bender Blvd Hobbs, NM 88240 Office: (575) 263-0431 Email: Cherreramurillo@chevron.com

PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Chevron USA Inc.
LEASE NO.:	NMNM120350
WELL NAME & NO.:	2H-HH SO 12 Fed Com
SURFACE HOLE FOOTAGE:	2657'/S & 1294'/W
BOTTOM HOLE FOOTAGE	180'/S & 660'/W
LOCATION:	Section 12, T.26 S., R.27 E., NMPM
COUNTY:	Eddy County, New Mexico

A. Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

B. 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.**

C. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. 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.). The initial wellhead installed on the well will remain on the well with spools used as needed.

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 8 hours. 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.

Medium Cave/Karst

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

1. The **13-3/8** inch surface casing shall be set at approximately **425** feet and cemented to the surface. **(Excess cement calculates to -10 %, additional cement will be required)**

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is: (Ensure casing is set below the salt at approximately 2300')

    ☒ 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.** (Excess cement calculates to -14 %, additional cement will be required)

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.

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

    ☒ Cement should tie-back at least 200 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.

D. 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 53.

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.**

5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

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 (8 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.

E. DRILL STEM TEST

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

F. 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.

CRW 4/21/17

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Chevron USA Inc.
LEASE NO.:	NMNM120350
WELL NAME & NO.:	2H-HH SO 12 Fed Com
SURFACE HOLE FOOTAGE:	2657'/S & 1294'/W
BOTTOM HOLE FOOTAGE	180'/S & 660'/W
LOCATION:	Section 12, T.26 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.

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.

Visual Resource Management (VRM)

- Above-ground structures including meter housing that are not subject to safety requirements are painted a flat non-reflective paint color, Shale Green from the BLM Standard Environmental Color Chart (CC-001: June 2008)
- Chevron would use minimal light necessary for site safety, security, and operations.
- Light should be directed downward or only where needed.
- Low-pressure sodium lamps, such as yellow LED lighting (3,000 Kelvin or less) or equivalent, would be used to reduce sky glow and wildlife impacts.
- Properly shielded and mounted light fixtures would be used to reduce sky glow from upward pointing light, as well as trespass from light falling outside of desired area of illumination. Full cutoff shielding would be used during production.

Cave and Karst

** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

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 ½ 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 cave-bearing 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.

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.

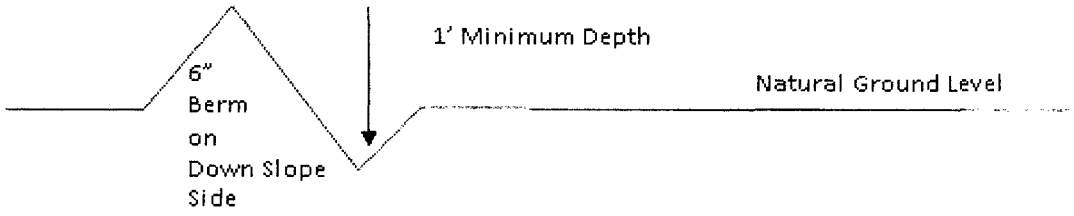
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Cattle guards

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards 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 cattle guards 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

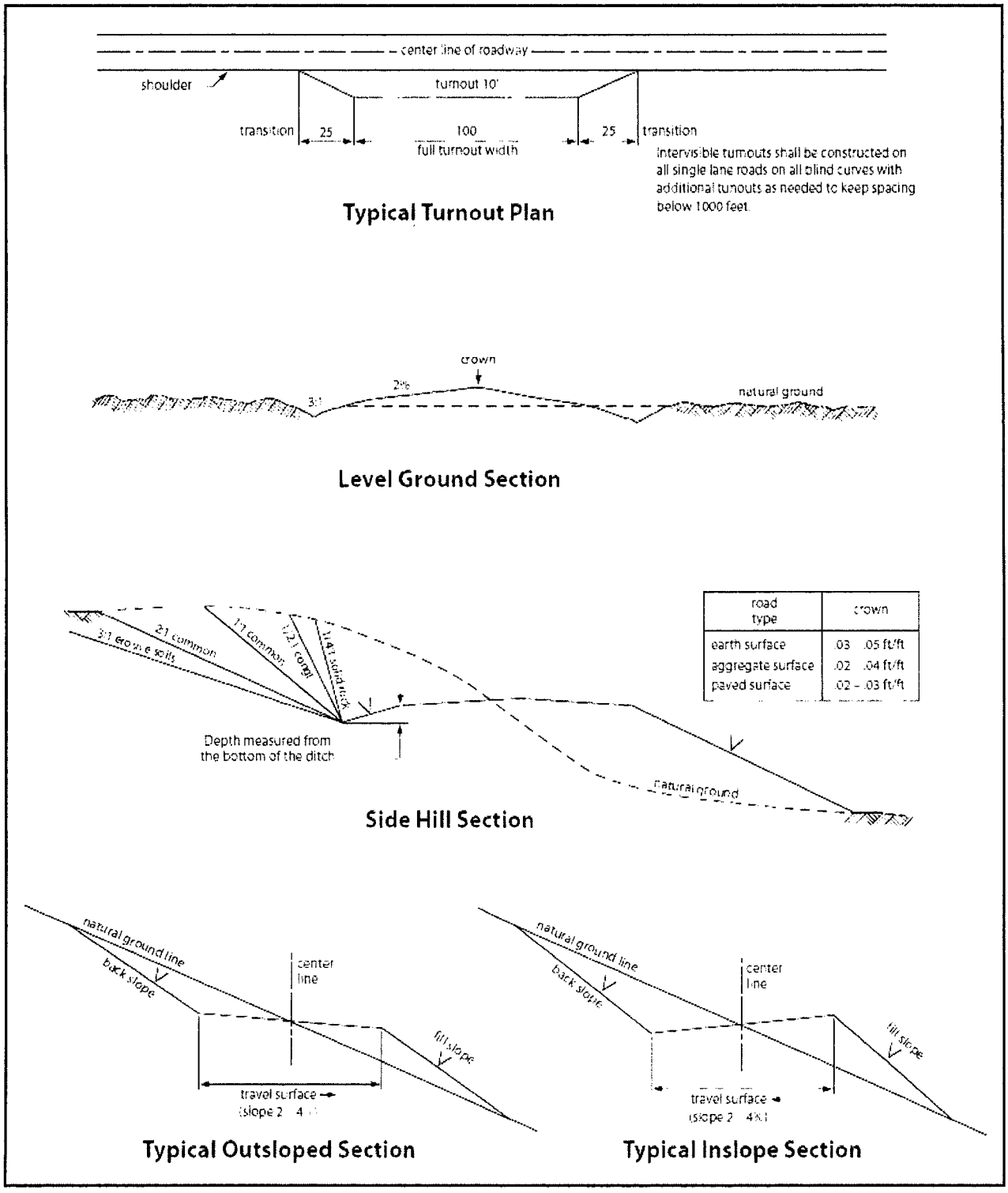


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

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

Containment Structures

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** 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;

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 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42

U.S.C. 9601, 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), 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.

VIII. 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).

IX. 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:

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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