

Carlsbad Field Office OCD Artesia

ATS-15-405
FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BHL

5. Lease Serial No.
NMNM116028 SHL 120 350
6. If Indian, Allottee or Tribe Name

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No.
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. HH SO 12 FED COM #1H
2. Name of Operator CHEVRON U.S.A. INC.		9. API Well No. 30-015-43457
3a. Address 15 SMITH ROAD MIDLAND, TEXAS 79705	3b. Phone No. (include area code) 432-687-7375	10. Field and Pool, or Exploratory HAY HOLLOW; BONE SPRING
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 249' FSL, & 800' FEL At proposed prod. zone 250' FNL, & 660' FEL		11. Sec., T. R. M. or Blk. and Survey or Area SEC 12, T26S, R27E, UL: P (SHL) SEC 12 T26S, R27E UL: A (BHL)
14. Distance in miles and direction from nearest town or post office* HEAD WEST FROM US ROUTE 285 APPROX 4.3 MILES ON WHITE CITY ROAD		12. County or Parish EDDY
15. Distance from proposed* 249' FSL location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)		13. State NM
16. No. of acres in lease NMNM116028 - 680 ACRES	17. Spacing Unit dedicated to this well 160 ACRES	
18. Distance from proposed location* 1100' FR SRO ST UNIT to nearest well, drilling, completed, COM #7H COG OPR applied for, on this lease, ft. LLC	19. Proposed Depth MD: 12,628' TVD: 7877'	20. BLM/BIA Bond No. on file CA0329
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3142' GL	22. Approximate date work will start* 11/30/2015	23. Estimated duration 1-2 MONTHS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

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

25. Signature 	Name (Printed/Typed) DENISE PINKERTON	Date 02/06/2015
Title REGULATORY SPECIALIST		

Approved by (Signature) /S/STEPHEN J. CAFFEY	Name (Printed/Typed)	Date OCT 29 2015
Title FIELD MANAGER	Office BLM-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.

(Continued on page 2)

*(Instructions on page 2)

Witness Surface & Intermediate Casing

Carlsbad Controlled Water Basin

11/20/15

NM OIL CONSERVATION
ARTESIA DISTRICT

NOV 09 2015

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

RECEIVED

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

PROCESSING FEE INFORMATION CALLED IN/EMAILED IN TO Sargh BLM, ON 02/12/2015

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

PLEASE FIND THE FOLLOWING ATTACHMENTS:

APD FORM

PRIVATE OWNER AGREEMENT (IF APPLICABLE)

C102 FORM

SUPPORTING MAPS (EXHIBIT 1)

PROPOSED PAD & ACCESS ROAD (SURFACE USE PLAT) (EXHIBIT 2)

MILE RADIUS MAP (EXHIBIT 3)

DRILLING PLAN

DIRECTIONAL PLOT & PLAN

BOP SCHEMATIC

BOPE TESTING

CHOKE MANIFOLD SCHEMATIC

RIG LAYOUT/FACILITY PAD (EXHIBIT 6)

TEST CERTIFICATE & GRAPH

WELLHEAD SCHEMATIC

H2S PLAN

SURFACE USE PLAN

OIL & GAS MEASUREMENT SCHEMATIC (EXHIBIT 4 & 5) (FACILITY LAYOUT, POWERLINE, FLOWLINE,

OPERATOR CERTIFICATION – SIGNED

ARCH SURVEY

ONSITE INSPECTION CONDUCTED ON 11/10/14 BY John Bell WITH BLM.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-43457	² Pool Code 30215	³ Pool Name New Hollow; Bone Spring
⁴ Property Code 3156666	⁵ Property Name HH SO 12 FED COM	
⁷ OGRID No. 4323	⁸ Operator Name CHEVRON U.S.A. INC.	⁶ Well Number 1H ⁹ Elevation 3142'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	12	26 SOUTH	27 EAST, N.M.P.M.		249'	SOUTH	800'	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	12	26 SOUTH	27 EAST, N.M.P.M.		250'	NORTH	660'	EAST	EDDY

¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--------------------------------------	-------------------------------	----------------------------------	-------------------------

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

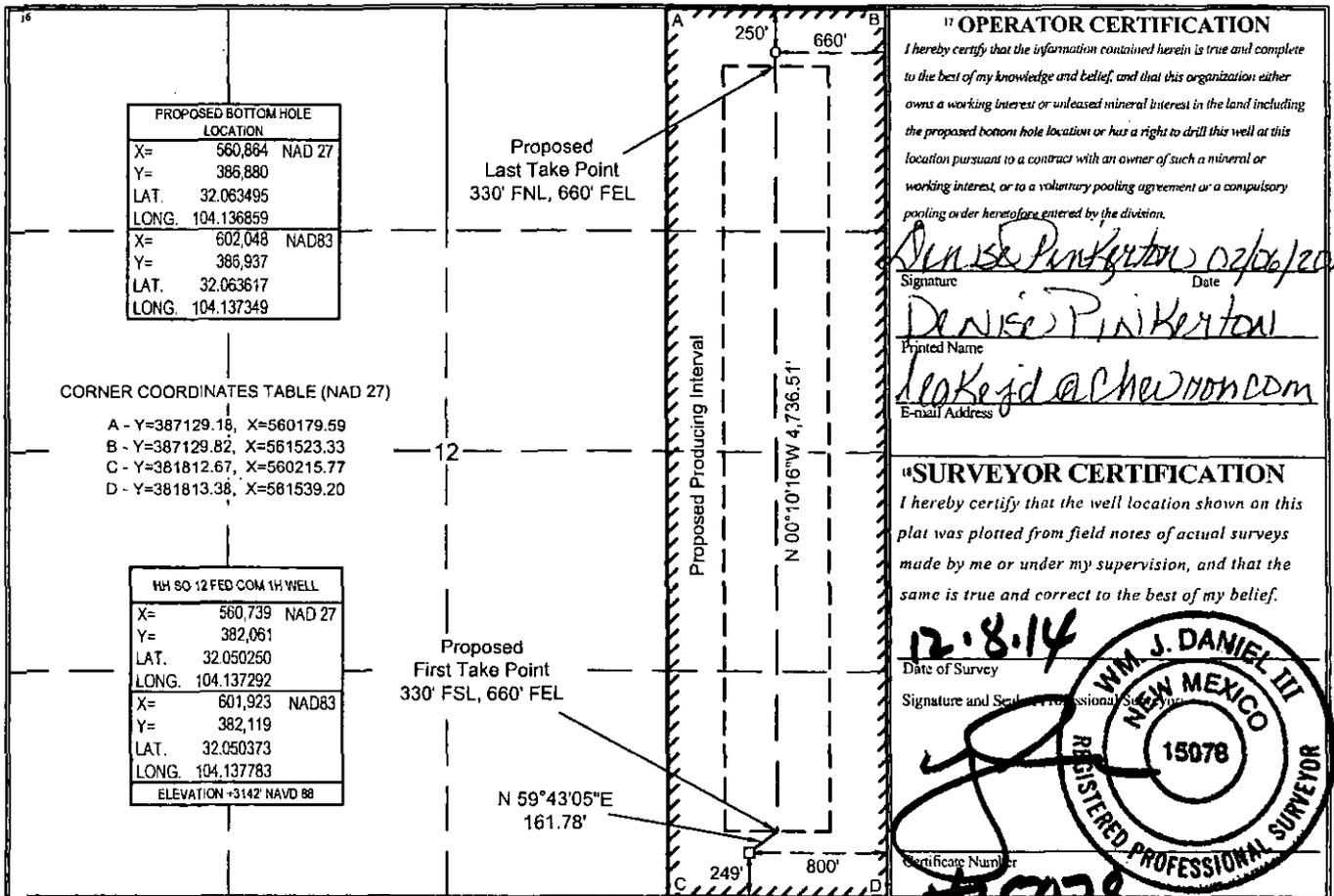


Exhibit 1

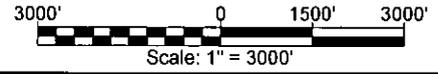


NAD 27 NEW MEXICO EAST ZONE

DIRECTIONS TO LOCATION:
 Head West from US Route 285 approx. 4.3 miles on White City Road to the
 HH SO 12 FED COM No.1H Access on South side of road.



VICINITY MAP



LEGEND	
	Drillsite
	Proposed Road
	Existing Trail/Road
	Existing Frac Pond
	Proposed Well

CHEVRON U.S.A. INC.
 HH SO 12 FED COM 1H WELL
 LOCATED 249' FSL AND 800' FEL
 SECTION 12, T26S-R27E
 EDDY COUNTY, NEW MEXICO



Lafayette New Orleans Houston
 135 Regency Sq. Lafayette, LA 70508
 Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

DRAWN BY: TPD

PROJ. MGR.: GDG

FILENAME: T:\2014\2148329\DWG\HH SO 12 FED COM 1H APD.dwg

REVISED: 2 DEC 2014 GDG
 8 DEC 2014 GDG

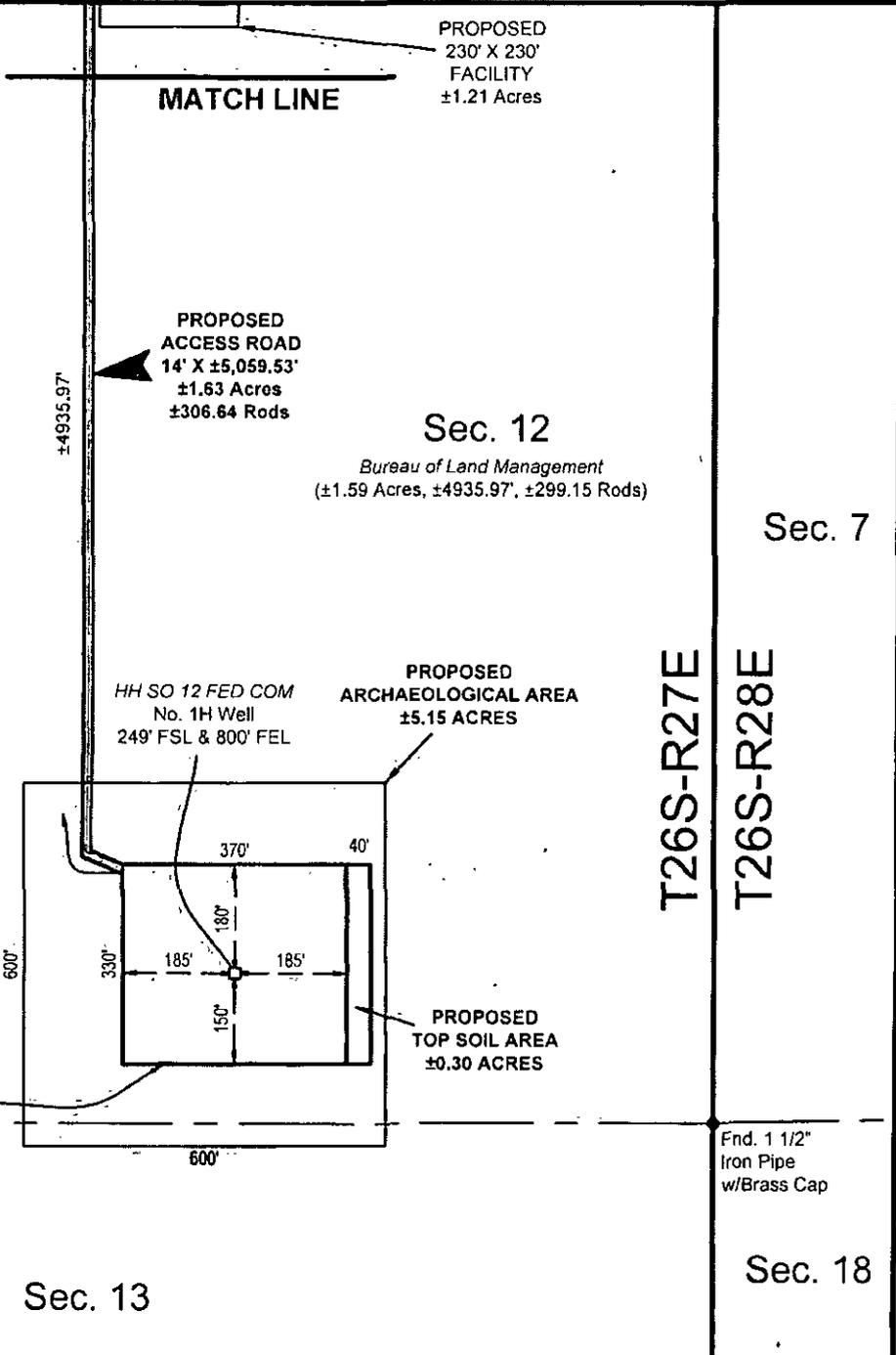
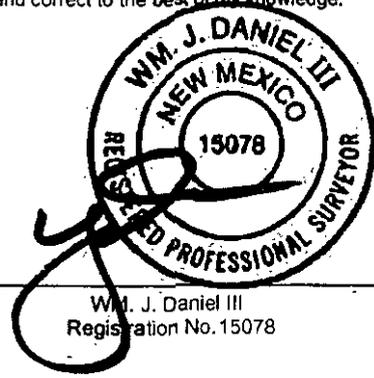
DATE: 11/25/2014

SHEET 1 OF 1 SHEETS

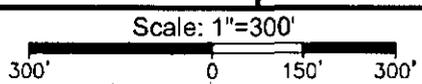
Exhibit Z

LEGEND	
	Section Line
	Found Occupation

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



SURFACE USE PLAT



CHEVRON U.S.A. INC.
PROPOSED PAD & ACCESS ROAD
HH SO 12 FED COM NO. 1H WELL
SECTIONS 1 & 12, T26S-R27E
EDDY COUNTY, NEW MEXICO

PAGE 1 OF 4



135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

DRAWN BY: TPD		REVISIONS	
PROJ. MGR.: GDG	No. 2	DATE: 12/8/2014	REVISED BY: GDG
DATE: 11/25/2014	No. 3	DATE: 01/14/2015	REVISED BY: BOR
FILENAME: T:\2014\2148329\DWG\HH SO 12 FED 1H SUP.dwg			

#2 cont

LEGEND	
	Section Line

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



WM. J. Daniel III
Registration No. 15078

MATCH LINE

±4935.97'

PROPOSED
ACCESS ROAD
14' X ±5,059.53'
±1.63 Acres
±306.64 Rods

T26S-R27E

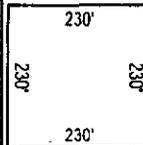
T26S-R28E

Sec. 12

Bureau of Land Management
(±1.59 Acres, ±4935.97', ±299.15 Rods)

Sec. 7

PROPOSED
230' X 230'
FACILITY
±1.21 Acres

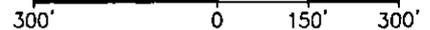


MATCH LINE



SURFACE USE PLAT

Scale: 1"=300'



CHEVRON U.S.A. INC.
PROPOSED PAD & ACCESS ROAD
HH SO 12 FED COM NO. 1H WELL
SECTIONS 1 & 12, T26S-R27E
EDDY COUNTY, NEW MEXICO

PAGE 2 OF 4



135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

DRAWN BY: TPD		REVISIONS	
PROJ. MGR: GDG	No. 2	DATE: 12/8/2014	REVISED BY: GDG
DATE: 11/25/2014	No. 3	DATE: 01/14/2015	REVISED BY: BOR
FILENAME: T:\2014\2148329\DWG\HH SO 12 FED 1H SUP.dwg			

#2 CONT

LEGEND	
	Section Line
	Existing Road
	Found Occupation

Sec. 1

Bureau of Land Management
 (±0.04 Acres, ±123.56', ±7.49 Rods)

Sec. 6



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



WM. J. Daniel III
 Registration No. 15078

Existing Facility

PROPOSED
 ACCESS ROAD
 14' X ±5,059.53'
 ±1.63 Acres
 ±306.64 Rods

Sec. 7

Sec. 12

Bureau of Land Management
 (±1.59 Acres, ±4935.97', ±299.15 Rods)

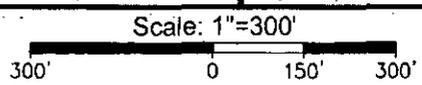
T26S-R27E
 T26S-R28E

±4935.97'

MATCH LINE



SURFACE USE PLAT



CHEVRON U.S.A. INC.
 PROPOSED PAD & ACCESS ROAD
 HH SO 12 FED COM NO. 1H WELL
 SECTIONS 1 & 12, T26S-R27E
 EDDY COUNTY, NEW MEXICO

PAGE 3 OF 4



135 Regency Sq. Lafayette, LA 70508
 Ph. 337-237-2200 Fax. 337-232-3299
 www.fenstermaker.com

DRAWN BY: TPD		REVISIONS	
PROJ. MGR.: GDG	No. 2	DATE: 12/8/2014	REVISED BY: GDG
DATE: 11/25/2014	No. 3	DATE: 01/14/2015	REVISED BY: BOR
FILENAME: T:\2014\2148329\DWG\HH SO 12 FED 1H SUP.dwg			

#2 CONT

DISCLAIMER: At this time, G.H. Fenstermaker & Associates, LLC 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:

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.

HH SO 12 FED COM NO. 1H WELL	NE TOP SOIL AREA CORNER	NW ARCH. AREA CORNER
X= 560,739 NAD 27	X= 560,923 NAD 27	X= 560,387 NAD 27
Y= 382,061	Y= 382,242	Y= 382,375
LAT. 32.050250	ELEVATION +3147' NAVD 88	ELEVATION +3151' NAVD 88
LONG. 104.137292	SE TOP SOIL AREA CORNER	NE ARCH. AREA CORNER
X= 601,923 NAD83	X= 560,964 NAD 27	X= 560,987 NAD 27
Y= 382,119	Y= 381,912	Y= 382,377
LAT. 32.050373	ELEVATION +3158' NAVD 88	ELEVATION +3176' NAVD 88
LONG. 104.137783	NW FACILITY PAD CORNER	SE ARCH. AREA CORNER
ELEVATION +3142' NAVD 88	X= 560,505 NAD 27	X= 560,990 NAD 27
NW PAD CORNER	Y= 383,858	Y= 381,777
X= 560,553 NAD 27	ELEVATION +3136' NAVD 88	ELEVATION +3139' NAVD 88
Y= 382,241	NE FACILITY PAD CORNER	SW ARCH. AREA CORNER
ELEVATION +3147' NAVD 88	X= 560,735 NAD 27	X= 560,390 NAD 27
NE PAD CORNER/NW TOP SOIL AREA CORNER	Y= 383,859	Y= 381,775
X= 560,923 NAD 27	ELEVATION +3135' NAVD 88	ELEVATION +3141' NAVD 88
Y= 382,242	SE FACILITY PAD CORNER	
ELEVATION +3154' NAVD 88	X= 560,736 NAD 27	
SE PAD CORNER/SW TOP SOIL AREA CORNER	Y= 383,629	
X= 560,924 NAD 27	ELEVATION +3138' NAVD 88	
Y= 381,912	SW FACILITY PAD CORNER	
ELEVATION +3147' NAVD 88	X= 560,506 NAD 27	
SW PAD CORNER	Y= 383,628	
X= 560,554 NAD 27	ELEVATION +3140' NAVD 88	
Y= 381,911		
ELEVATION +3141' NAVD 88		

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



SURFACE USE PLAT

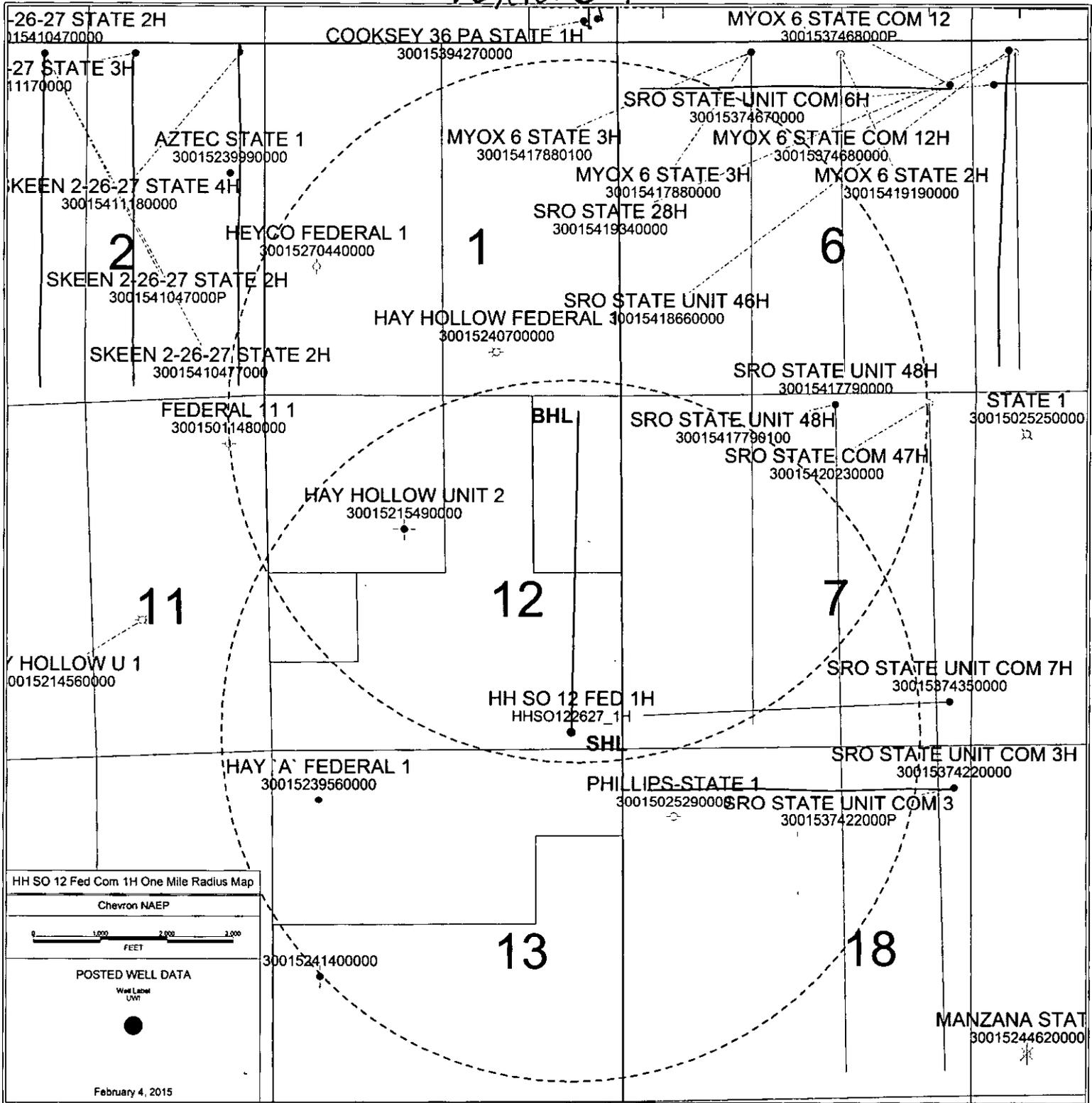
CHEVRON U.S.A. INC.
PROPOSED PAD & ACCESS ROAD
HH SO 12 FED COM NO. 1H WELL
SECTIONS 1 & 12, T26S-R27E
EDDY COUNTY, NEW MEXICO



135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

DRAWN BY: TPD	REVISIONS		
PROJ. MGR.: GDG	No. 2	DATE: 12/8/2014	REVISED BY: GDG
DATE: 11/25/2014	No. 3	DATE: 01/14/2015	REVISED BY: BOR
FILENAME: T:\2014\2148329\DWG\HH SO 12 FED 1H SUP.dwg			

Exhibit 3



1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA	KBTVD	MD
Rustler	0	0	
Castile	2400	773	
Lamar	825	2348	
Bell Canyon	795	2378	
Cherry Canyon	-50	3223	
Brushy Canyon	-1290	4463	
Bone Spring Limestone	-2886	6059	
1st Bone Spring	-3772	6945	
2nd Bone Spring	-4453	7626	
Lateral TD (2nd Bone Spring)	(4,712)	7,885	12628

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		150
Water	Rustler	0
Water	Bell Canyon	2378
Water	Cherry Canyon	3223
Oil/Gas	Brushy Canyon	4463
Oil/Gas	Bone Spring Limestone	6059
Oil/Gas	1st Bone Spring	6945
Oil/Gas	2nd Bone Spring	7626

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

3. BOP EQUIPMENT

Will have a minimum of a 5000 psi rig stack (see proposed schematic) for drill out below surface casing. Stack will be tested as specified in the attached testing requirements. Chevron requests a variance to use A coflex hose with a metal protective covering that will be utilized between the BOP and Choke manifold. Please see the attached testing and certification information.³

See COA

See COA

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

4. CASING PROGRAM

a. The proposed casing program will be as follows:

*See
CSPA*

Purpose	From	To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	500' 400'	17-1/2"	13-3/8"	48 #	H-40	STC	New
Intermediate	0'	2,300'	12-1/4"	9-5/8"	40 #	HCK-55	LTC	New
Production	0'	12,368'	8-3/4"	5-1/2"	17.0 #	HCP-110	CDC	New

b. Casing design subject to revision based on geologic conditions encountered.

c. *****A "Worst Case" casing design for wells in a particular area is used below to calculate the Casing Safety Factors. If for any reason the casing design for a particular well requires setting casing deeper than the following "worst case" design, then the Casing Safety Factors will be recalculated & sent to the BLM prior to drilling.**

d. **Chevron will fill casing at a minimum of every 20 jts (840') while running for intermediate and production casing in order to maintain collapse SF.**

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

Surface Casing: 1500'
 Intermediate Casing: 5300'
 Production Casing: 16,500' MD/11,500' TVD (5000' VS @ 90 deg inc)

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension
Surface	1.28	1.14	1.6
Shallow Intermediate	1.28	1.25	1.6
Production	1.34	1.65	1.6

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

	Surf	Int	Prod
Burst Design			
Pressure Test- Surface, Int, Prod Csg 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
Surface				(ppg)	(sx/cu ft)	Open Hole		gal/sk
Lead	C + 4% Gel+2%CaCl	0'	300'	13.5	1.78	125	228	9.18
Tail	Class C+2%CaCl	300'	500'	14.8	1.35	125	290	6.39
Intermediate								
Lead	65C/35Poz +6%Gel +5%Salt	0'	1,700'	13.7	1.68	100	560	9.72
Tail	Class C	1,700'	2,300'	14.8	1.33	100	311	6.24
Production								
1st Lead	50% Class H+ 50% Silicalite +2% Gel	1,800'	7,320'	11.3	2.54	100	1050	15.07
2nd Lead	Versacem (Halliburton)	7,320'	11,330'	13.2	1.81	35	765	8.10
Tail	Acid Soluble Cement	11,330'	12,628'	15	2.63	0	100	11.2

1. Final cement volumes will be determined by caliper.
2. Surface casing shall have at least one centralizer installed on each of the bottom three joints starting with the shoe joint.
3. Production casing will have one horizontal type centralizer on every joint for the first 1000' from TD, then every other joint to EOB, and then every third joint to KOP. Bowspring type centralizers will be run from KOP to intermediate casing.

6. MUD PROGRAM

From	To	Type	Weight	F. Vis	Filtrate
0'	500'	Spud Mud	8.3 - 8.7	32 - 34	NC - NC
0' 500'	2,300'	Brine	9.5 - 10.1	28 - 29	NC - NC
2,300'	7,320'	FW/Cut Brine	8.3 - 9.5	28 - 29	NC - NC
7,320'	8,221'	Cut Brine	8.3 - 9.5	28 - 30	15 - 25
8,221'	12,628'	FW/Cut Brine	8.3 - 9.5	28 - 29	15 - 25

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

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

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

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

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

7. TESTING, LOGGING, AND CORING

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

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

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

- c. Conventional whole core samples are not planned.
- d. A Directional Survey will be run.

8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

- a. No abnormal pressures or temperatures are expected. Estimated BHP is: 3670 psi
- b. Hydrogen sulfide gas is not anticipated. An H2S Contingency plan is attached with this APD in the event that H2S is encountered



Project: Eddy County, NM
Site: Hayhurst South
Well: Hayhurst South 12 Fed Com 1H
Wellbore: Wellbore #1
Design: Plan #3
Rig: Ensign 767

SURFACE LOCATION			
US State Plane 1927 (Exact solution) New Mexico East 3001			
Elevation: GL 3142.0' + KB 31.0' @ 3173.00ustf (Ensign 787)			
Northing	Easting	Latitude	Longitude
382081.00	560739.00	32° 3' 0.897 N	104° 8' 14.247 W

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Hayhurst South 12 Fed Com 1H BHL	7878.59	4819.00	125.00	386880.00	560864.00	32° 3' 48.586 N	104° 8' 12.693 W
Hayhurst South 12 Fed Com 1H LTP	7878.73	4738.51	125.31	386799.51	560864.31	32° 3' 47.789 N	104° 8' 12.691 W
Hayhurst South 12 Fed Com 1H FTP	7884.72	81.56	139.70	382142.58	560878.70	32° 3' 1.702 N	104° 8' 12.622 W

SECTION DETAILS

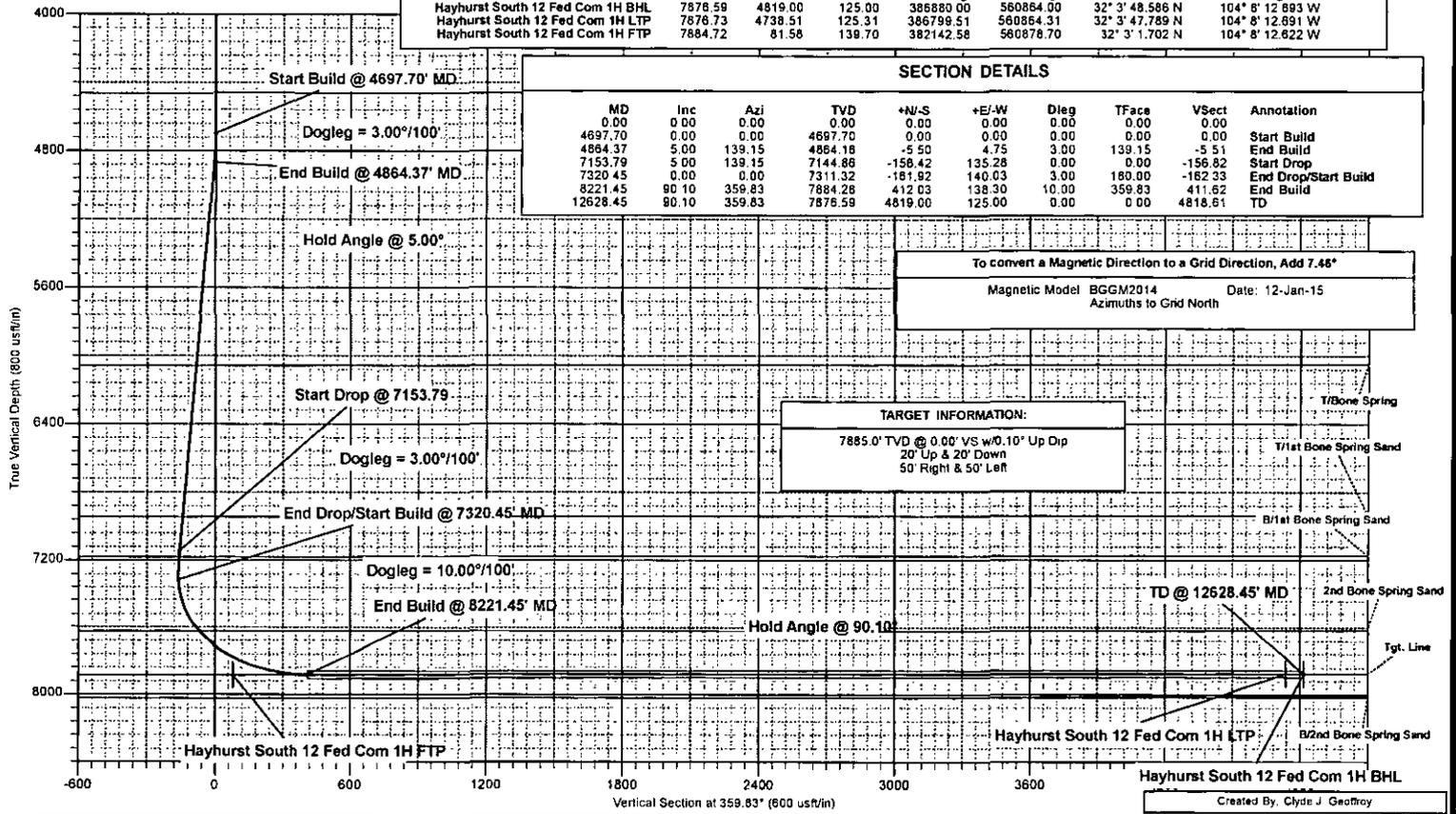
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4697.70	0.00	0.00	4697.70	0.00	0.00	0.00	0.00	0.00	Start Build
4864.37	5.00	139.15	4864.18	-5.50	4.75	3.00	139.15	-5.51	End Build
7153.79	5.00	139.15	7144.86	-156.42	135.28	0.00	0.00	-156.82	Start Drop
7320.45	0.00	0.00	7311.32	-181.92	140.03	3.00	180.00	-162.33	End Drop/Start Build
8221.45	90.10	359.83	7884.26	412.03	138.30	10.00	359.83	411.62	End Build
12628.45	90.10	359.83	7876.59	4819.00	125.00	0.00	0.00	4818.61	TD

To convert a Magnetic Direction to a Grid Direction, Add 7.46°

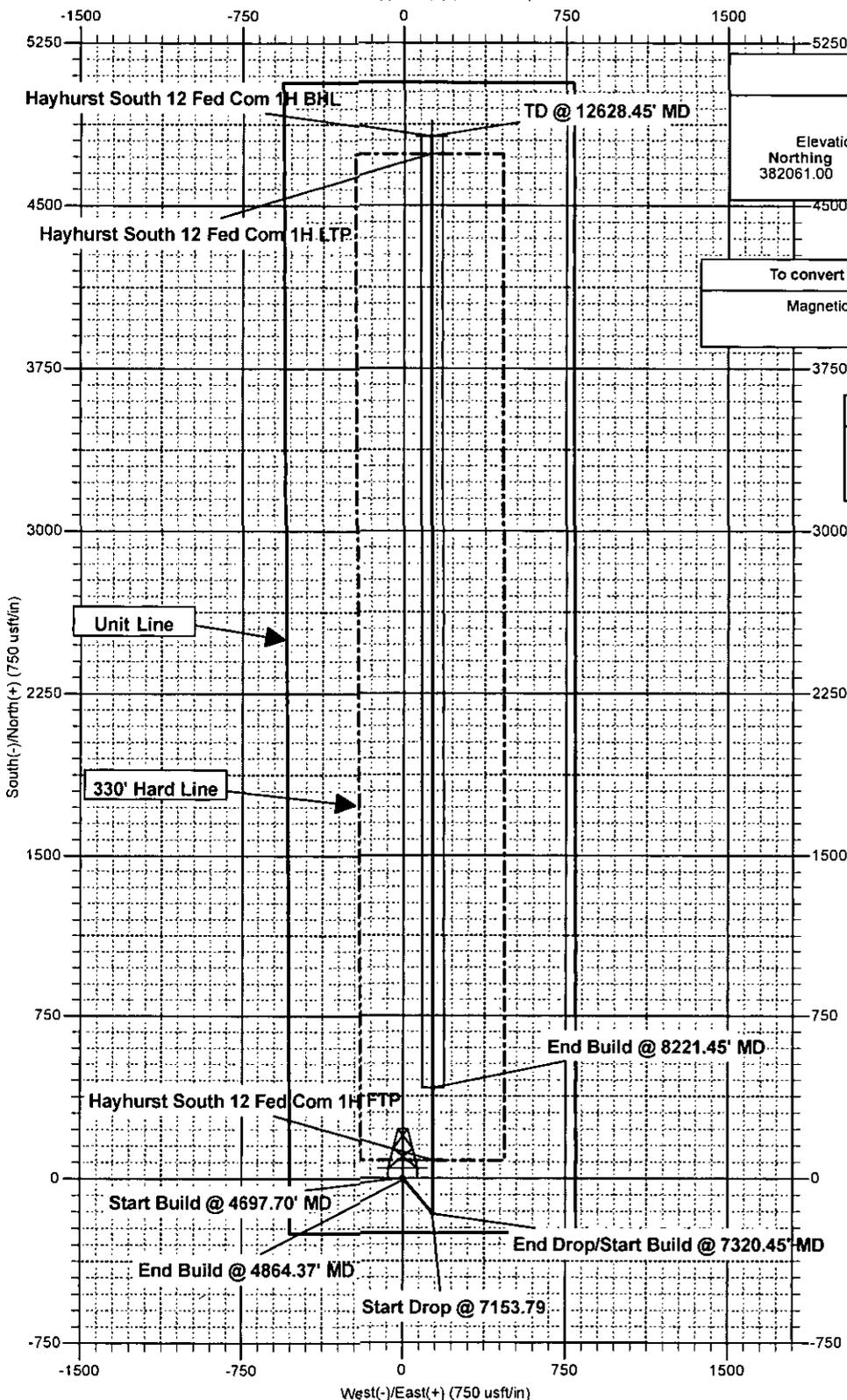
Magnetic Model BGGM2014 Date: 12-Jan-15
Azimuths to Grid North

TARGET INFORMATION:

7885.0' TVD @ 0.00° VS w/0.10° Up Dip
20' Up & 20' Down
50' Right & 50' Left



Project: Eddy County, NM
 Site: Hayhurst South
 Well: Hayhurst South 12 Fed Com 1H
 Wellbore: Wellbore #1
 Plan: Plan #3
 Rig: Ensign 767



SURFACE LOCATION			
US State Plane 1927 (Exact solution) New Mexico East 3001			
Elevation: GL 3142.0' + KB 31.0' @ 3173.00usft (Ensign 767)			
Northing	Easting	Latitude	Longitude
382061.00	560739.00	32° 3' 0.897 N	104° 8' 14.247 W

To convert a Magnetic Direction to a Grid Direction, Add 7.46°
 Magnetic Model: BGGM2014 Date: 12-Jan-15
 Azimuths to Grid North

TARGET INFORMATION:
 7885.0' TVD @ 0.00° VS w/0.10° Up Dip
 20' Up & 20' Down
 50' Right & 50' Left



Chevron USA, Inc.

**Eddy County, NM
Hayhurst South
Hayhurst South 12 Fed Com 1H**

Wellbore #1

Plan: Plan #3

Sperry Drilling Services Proposal Report

16 January, 2015

Well Coordinates: 382,061.00 N, 560,739.00 E (32° 03' 00.90" N, 104° 08' 14.25" W)
Ground Level: 3,142.00 usft

Local Coordinate Origin: Centered on Well Hayhurst South 12 Fed Com 1H
Viewing Datum: GL 3142.0' + KB 31.0' @ 3173.00usft (Ensign 767)
TVDs to System: N
North Reference: Grid
Unit System: API - US Survey Feet

Version: 5000.1 Build: 72

HALLIBURTON

HALLIBURTON

Plan Report for Hayhurst South 12 Fed Com 1H - Plan #3

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
773.00	0.00	0.00	773.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Castille										
2,348.00	0.00	0.00	2,348.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lamar LS										
2,378.00	0.00	0.00	2,378.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon										
3,223.00	0.00	0.00	3,223.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon										
4,463.00	0.00	0.00	4,463.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon										
4,697.70	0.00	0.00	4,697.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build @ 4697.70' MD - Dogleg = 3.00°/100'										
4,700.00	0.07	139.15	4,700.00	0.00	0.00	0.00	3.00	3.00	0.00	139.15
4,800.00	3.07	139.15	4,799.95	-2.07	1.79	-2.08	3.00	3.00	0.00	0.00
4,864.37	5.00	139.15	4,864.16	-5.50	4.75	-5.51	3.00	3.00	0.00	0.00
End Build @ 4864.37' MD - Hold Angle @ 5.00°										
4,900.00	5.00	139.15	4,899.65	-7.85	6.79	-7.87	0.00	0.00	0.00	0.00
5,000.00	5.00	139.15	4,999.27	-14.44	12.49	-14.48	0.00	0.00	0.00	0.00
5,100.00	5.00	139.15	5,098.89	-21.03	18.19	-21.08	0.00	0.00	0.00	0.00
5,200.00	5.00	139.15	5,198.51	-27.62	23.89	-27.69	0.00	0.00	0.00	0.00
5,300.00	5.00	139.15	5,298.13	-34.22	29.59	-34.30	0.00	0.00	0.00	0.00
5,400.00	5.00	139.15	5,397.75	-40.81	35.29	-40.91	0.00	0.00	0.00	0.00
5,500.00	5.00	139.15	5,497.37	-47.40	40.99	-47.52	0.00	0.00	0.00	0.00
5,600.00	5.00	139.15	5,596.99	-53.99	46.69	-54.13	0.00	0.00	0.00	0.00
5,700.00	5.00	139.15	5,696.61	-60.58	52.39	-60.74	0.00	0.00	0.00	0.00
5,800.00	5.00	139.15	5,796.23	-67.18	58.10	-67.35	0.00	0.00	0.00	0.00
5,900.00	5.00	139.15	5,895.85	-73.77	63.80	-73.96	0.00	0.00	0.00	0.00
6,000.00	5.00	139.15	5,995.47	-80.36	69.50	-80.57	0.00	0.00	0.00	0.00
6,063.92	5.00	139.15	6,059.15	-84.58	73.14	-84.79	0.00	0.00	0.00	0.00
T/Bone Spring										
6,100.00	5.00	139.15	6,095.09	-86.95	75.20	-87.18	0.00	0.00	0.00	0.00
6,200.00	5.00	139.15	6,194.71	-93.55	80.90	-93.79	0.00	0.00	0.00	0.00
6,300.00	5.00	139.15	6,294.33	-100.14	86.60	-100.39	0.00	0.00	0.00	0.00
6,400.00	5.00	139.15	6,393.95	-106.73	92.30	-107.00	0.00	0.00	0.00	0.00
6,500.00	5.00	139.15	6,493.56	-113.32	98.00	-113.61	0.00	0.00	0.00	0.00
6,600.00	5.00	139.15	6,593.18	-119.92	103.70	-120.22	0.00	0.00	0.00	0.00
6,700.00	5.00	139.15	6,692.80	-126.51	109.41	-126.83	0.00	0.00	0.00	0.00
6,800.00	5.00	139.15	6,792.42	-133.10	115.11	-133.44	0.00	0.00	0.00	0.00
6,900.00	5.00	139.15	6,892.04	-139.69	120.81	-140.05	0.00	0.00	0.00	0.00
6,953.41	5.00	139.15	6,945.25	-143.21	123.85	-143.58	0.00	0.00	0.00	0.00
T/1st Bone Spring Sand										
7,000.00	5.00	139.15	6,991.66	-146.28	126.51	-146.66	0.00	0.00	0.00	0.00
7,100.00	5.00	139.15	7,091.28	-152.88	132.21	-153.27	0.00	0.00	0.00	0.00
7,153.79	5.00	139.15	7,144.87	-156.42	135.28	-156.82	0.00	0.00	0.00	0.00
Start Drop @ 7153.79' MD - Dogleg = 3.00°/100'										
7,190.31	3.90	139.15	7,181.28	-158.57	137.13	-158.97	3.00	-3.00	0.00	180.00
B/1st Bone Spring Sand										
7,200.00	3.61	139.15	7,190.94	-159.05	137.55	-159.46	3.00	-3.00	0.00	-180.00
7,300.00	0.61	139.15	7,290.87	-161.84	139.96	-162.25	3.00	-3.00	0.00	180.00
7,320.45	0.00	0.00	7,311.32	-161.92	140.03	-162.33	3.00	-3.00	0.00	-180.00
End Drop/Start Build @ 7320.45' MD - Dogleg = 10.00°/100'										
7,400.00	7.95	359.83	7,390.61	-156.41	140.01	-156.82	10.00	10.00	0.00	359.83
7,500.00	17.95	359.83	7,487.94	-134.02	139.95	-134.43	10.00	10.00	0.00	0.00
7,600.00	27.95	359.83	7,579.91	-95.07	139.83	-95.48	10.00	10.00	0.00	0.00
7,653.73	33.33	359.83	7,626.12	-67.69	139.75	-68.11	10.00	10.00	0.00	0.00
2nd Bone Spring Sand										

HALLIBURTON

Plan Report for Hayhurst South 12 Fed Com 1H - Plan #3

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
7,700.00	37.95	359.83	7,663.71	-40.74	139.66	-41.15	10.00	10.00	0.00	0.00
7,800.00	47.95	359.83	7,736.81	27.32	139.46	26.90	10.00	10.00	0.00	0.00
7,900.00	57.95	359.83	7,796.97	107.03	139.22	106.62	10.00	10.00	0.00	0.00
7,917.25	59.68	359.83	7,805.91	121.79	139.17	121.38	10.00	10.00	0.00	0.00
Hayhurst South 12 Fed Com 1H FTP										
8,000.00	67.95	359.83	7,842.39	195.98	138.95	195.57	10.00	10.00	0.00	0.00
8,100.00	77.95	359.83	7,871.66	291.47	138.66	291.05	10.00	10.00	0.00	0.00
8,177.72	85.73	359.83	7,882.68	368.34	138.43	367.93	10.00	10.00	0.00	0.00
Tgt. Line										
8,200.00	87.95	359.83	7,883.91	390.58	138.36	390.17	10.00	10.00	0.00	0.00
8,221.45	90.10	359.83	7,884.28	412.03	138.30	411.62	10.00	10.00	0.00	0.00
End Build @ 8221.45' MD - Hold Angle @ 90.10°										
8,300.00	90.10	359.83	7,884.14	490.58	138.06	490.17	0.00	0.00	0.00	0.00
8,400.00	90.10	359.83	7,883.97	590.58	137.76	590.17	0.00	0.00	0.00	0.00
8,500.00	90.10	359.83	7,883.79	690.58	137.46	690.17	0.00	0.00	0.00	0.00
8,600.00	90.10	359.83	7,883.62	790.58	137.16	790.17	0.00	0.00	0.00	0.00
8,700.00	90.10	359.83	7,883.44	890.58	136.85	890.17	0.00	0.00	0.00	0.00
8,800.00	90.10	359.83	7,883.27	990.58	136.55	990.17	0.00	0.00	0.00	0.00
8,900.00	90.10	359.83	7,883.09	1,090.58	136.25	1,090.17	0.00	0.00	0.00	0.00
9,000.00	90.10	359.83	7,882.92	1,190.58	135.95	1,190.17	0.00	0.00	0.00	0.00
9,100.00	90.10	359.83	7,882.74	1,290.57	135.65	1,290.17	0.00	0.00	0.00	0.00
9,200.00	90.10	359.83	7,882.57	1,390.57	135.35	1,390.17	0.00	0.00	0.00	0.00
9,300.00	90.10	359.83	7,882.40	1,490.57	135.04	1,490.17	0.00	0.00	0.00	0.00
9,400.00	90.10	359.83	7,882.22	1,590.57	134.74	1,590.17	0.00	0.00	0.00	0.00
9,500.00	90.10	359.83	7,882.05	1,690.57	134.44	1,690.17	0.00	0.00	0.00	0.00
9,600.00	90.10	359.83	7,881.87	1,790.57	134.14	1,790.17	0.00	0.00	0.00	0.00
9,700.00	90.10	359.83	7,881.70	1,890.57	133.84	1,890.17	0.00	0.00	0.00	0.00
9,800.00	90.10	359.83	7,881.52	1,990.57	133.53	1,990.17	0.00	0.00	0.00	0.00
9,900.00	90.10	359.83	7,881.35	2,090.57	133.23	2,090.17	0.00	0.00	0.00	0.00
10,000.00	90.10	359.83	7,881.17	2,190.57	132.93	2,190.17	0.00	0.00	0.00	0.00
10,100.00	90.10	359.83	7,881.00	2,290.57	132.63	2,290.17	0.00	0.00	0.00	0.00
10,200.00	90.10	359.83	7,880.83	2,390.57	132.33	2,390.17	0.00	0.00	0.00	0.00
10,300.00	90.10	359.83	7,880.65	2,490.57	132.03	2,490.17	0.00	0.00	0.00	0.00
10,400.00	90.10	359.83	7,880.48	2,590.57	131.72	2,590.16	0.00	0.00	0.00	0.00
10,500.00	90.10	359.83	7,880.30	2,690.57	131.42	2,690.16	0.00	0.00	0.00	0.00
10,600.00	90.10	359.83	7,880.13	2,790.57	131.12	2,790.16	0.00	0.00	0.00	0.00
10,700.00	90.10	359.83	7,879.95	2,890.57	130.82	2,890.16	0.00	0.00	0.00	0.00
10,800.00	90.10	359.83	7,879.78	2,990.56	130.52	2,990.16	0.00	0.00	0.00	0.00
10,900.00	90.10	359.83	7,879.60	3,090.56	130.22	3,090.16	0.00	0.00	0.00	0.00
11,000.00	90.10	359.83	7,879.43	3,190.56	129.91	3,190.16	0.00	0.00	0.00	0.00
11,100.00	90.10	359.83	7,879.26	3,290.56	129.61	3,290.16	0.00	0.00	0.00	0.00
11,200.00	90.10	359.83	7,879.08	3,390.56	129.31	3,390.16	0.00	0.00	0.00	0.00
11,300.00	90.10	359.83	7,878.91	3,490.56	129.01	3,490.16	0.00	0.00	0.00	0.00
11,400.00	90.10	359.83	7,878.73	3,590.56	128.71	3,590.16	0.00	0.00	0.00	0.00
11,500.00	90.10	359.83	7,878.56	3,690.56	128.41	3,690.16	0.00	0.00	0.00	0.00
11,600.00	90.10	359.83	7,878.38	3,790.56	128.10	3,790.16	0.00	0.00	0.00	0.00
11,700.00	90.10	359.83	7,878.21	3,890.56	127.80	3,890.16	0.00	0.00	0.00	0.00
11,800.00	90.10	359.83	7,878.04	3,990.56	127.50	3,990.16	0.00	0.00	0.00	0.00
11,900.00	90.10	359.83	7,877.86	4,090.56	127.20	4,090.16	0.00	0.00	0.00	0.00
12,000.00	90.10	359.83	7,877.69	4,190.56	126.90	4,190.16	0.00	0.00	0.00	0.00
12,100.00	90.10	359.83	7,877.51	4,290.56	126.59	4,290.16	0.00	0.00	0.00	0.00
12,200.00	90.10	359.83	7,877.34	4,390.56	126.29	4,390.16	0.00	0.00	0.00	0.00
12,300.00	90.10	359.83	7,877.16	4,490.56	125.99	4,490.16	0.00	0.00	0.00	0.00
12,400.00	90.10	359.83	7,876.99	4,590.55	125.69	4,590.16	0.00	0.00	0.00	0.00
12,500.00	90.10	359.83	7,876.81	4,690.55	125.39	4,690.16	0.00	0.00	0.00	0.00
12,547.95	90.10	359.83	7,876.73	4,738.51	125.24	4,738.11	0.00	0.00	0.00	0.00
Hayhurst South 12 Fed Com 1H LTP										
12,600.00	90.10	359.83	7,876.64	4,790.55	125.09	4,790.16	0.00	0.00	0.00	0.00
12,628.45	90.10	359.83	7,876.59	4,819.00	125.00	4,818.61	0.00	0.00	0.00	0.00

HALLIBURTON**Plan Report for Hayhurst South 12 Fed Com 1H - Plan #3**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
-----------------------	-----------------	-------------	-----------------------	--------------	--------------	-------------------------	-------------------------	------------------------	-----------------------	----------------------

[TD @ 12628.45' MD - Hayhurst South 12 Fed Com 1H BHL

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
4,697.70	4,697.70	0.00	0.00	Start Build @ 4697.70' MD
4,697.70	4,697.70	0.00	0.00	Dogleg = 3.00°/100'
4,864.37	4,864.16	-5.50	4.75	End Build @ 4864.37' MD
4,864.37	4,864.16	-5.50	4.75	Hold Angle @ 5.00°
7,153.79	7,144.86	-156.42	135.28	Start Drop @ 7153.79
7,153.79	7,144.87	-156.42	135.28	Dogleg = 3.00°/100'
7,320.45	7,311.32	-161.92	140.03	End Drop/Start Build @ 7320.45' MD
7,320.45	7,311.32	-161.92	140.03	Dogleg = 10.00°/100'
8,221.45	7,884.28	412.03	138.30	End Build @ 8221.45' MD
8,221.45	7,884.28	412.03	138.30	Hold Angle @ 90.10°
12,628.45	7,876.59	4,819.00	125.00	TD @ 12628.45' MD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (usft)	+E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	359.83	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Plan #	Survey/Plan	Survey Tool
0.00	12,628.45	Plan #3		MWD+SC

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
773.00	773.00	Castille		-0.10	359.82
2,348.00	2,348.00	Lamar LS		-0.10	359.82
2,378.00	2,378.00	Bell Canyon		-0.10	359.82
3,223.00	3,223.00	Cherry Canyon		-0.10	359.82
4,463.00	4,463.00	Brushy Canyon		-0.10	359.82
6,063.92	6,059.00	T/Bone Spring		-0.10	359.82
6,953.41	6,945.00	T/1st Bone Spring Sand		-0.10	359.82
7,190.31	7,181.00	B/1st Bone Spring Sand		-0.10	359.82
7,653.73	7,626.00	2nd Bone Spring Sand		-0.10	359.82
8,177.72	7,883.33	Tgt. Line		-0.10	359.82

HALLIBURTON

Plan Report for Hayhurst South 12 Fed Com 1H - Plan #3

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
Hayhurst South 12 Fed Com 1H FTP	7,884.72	81.58	139.70	Point
Hayhurst South 12 Fed Com 1H BHL	7,876.59	4,819.00	125.00	Rectangle
Hayhurst South 12 Fed Com 1H LTP	7,876.73	4,738.51	125.31	Point

HALLIBURTON

North Reference Sheet for Hayhurst South - Hayhurst South 12 Fed Com 1H - Wellbore #1

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to GL 3142.0' + KB 31.0' @ 3173.00usft (Ensign 767). Northing and Easting are relative to Hayhurst South 12 Fed Com 1H Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 3001 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is -104.33°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:0° 0' 0.000 N°

False Easting: 500,000.00usft, False Northing: 0.00usft, Scale Reduction: 0.99991332

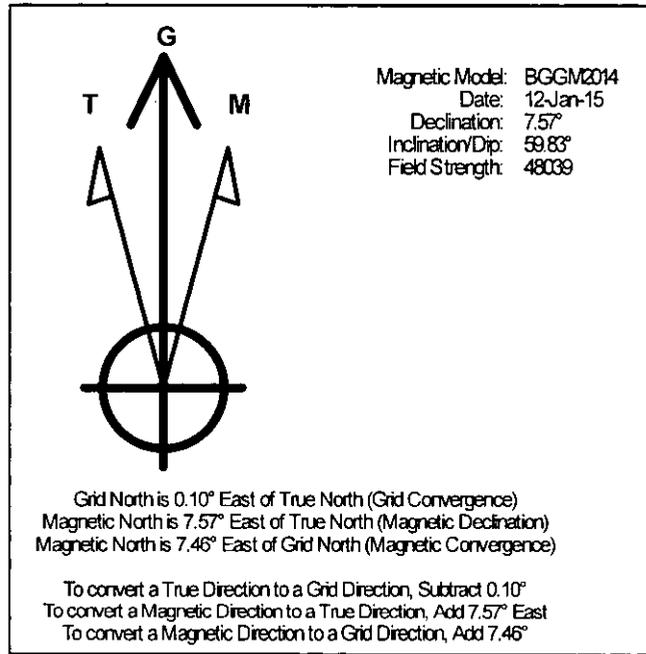
Grid Coordinates of Well: 382,061.00 usft N, 560,739.00 usft E

Geographical Coordinates of Well: 32° 03' 00.90" N, 104° 08' 14.25" W

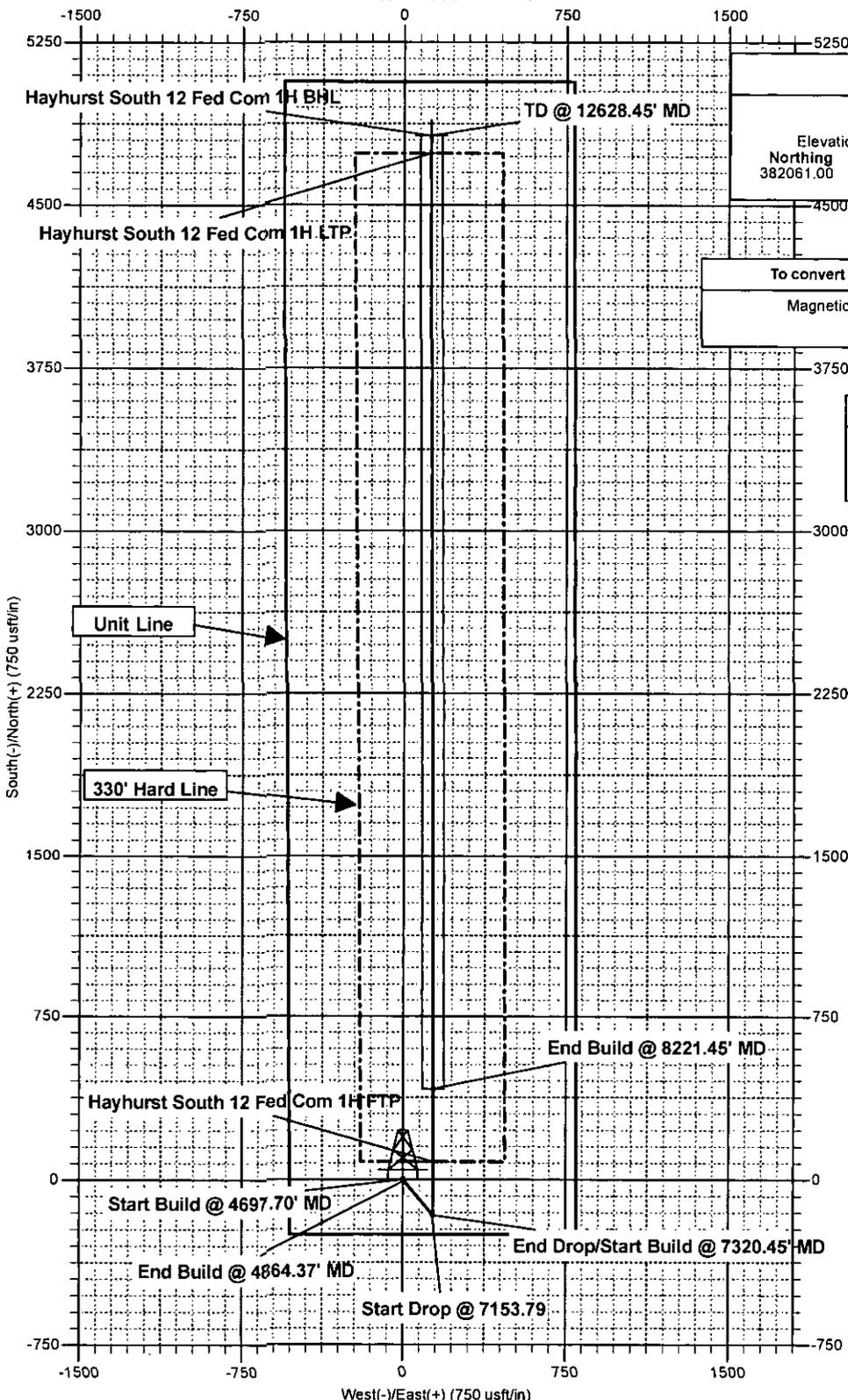
Grid Convergence at Surface is: 0.10°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,628.45usft the Bottom Hole Displacement is 4,820.62usft in the Direction of 1.49° (Grid).

Magnetic Convergence at surface is: -7.46° (12 January 2015, , BGGM2014)



Project: Eddy County, NM
Site: Hayhurst South
Well: Hayhurst South 12 Fed Com 1H
Wellbore: Wellbore #1
Plan: Plan #3
Rig: Ensign 767



SURFACE LOCATION			
US State Plane 1927 (Exact solution) New Mexico East 3001			
Elevation: GL 3142.0' + KB 31.0' @ 3173.00usft (Ensign 767)			
Northing	Easting	Latitude	Longitude
382061.00	560739.00	32° 3' 0.897 N	104° 8' 14.247 W

To convert a Magnetic Direction to a Grid Direction, Add 7.46°
 Magnetic Model: BGGM2014 Date: 12-Jan-15
 Azimuths to Grid North

TARGET INFORMATION:
 7885.0' TVD @ 0.00° VS w/0.10° Up Dip
 20' Up & 20' Down
 50' Right & 50' Left



BLOWOUT PREVENTOR SCHEMATIC

Minimum Requirements

OPERATION : Intermediate and Production Hole Sections

Minimum System Pressure Rating : 5,000 psi

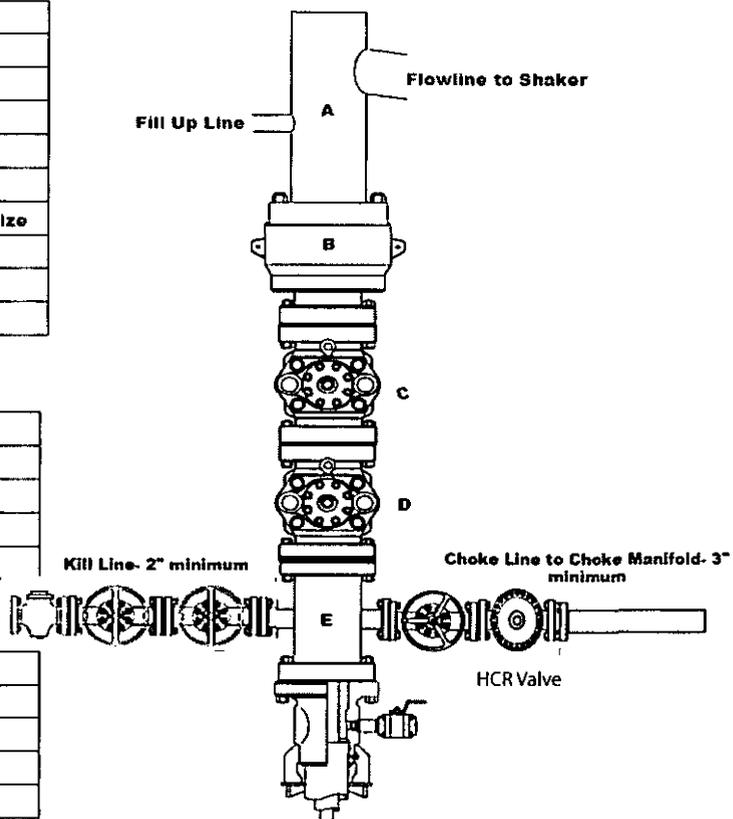
SIZE	PRESSURE	DESCRIPTION
A	N/A	Bell Nipple
B	13 5/8" 5,000 psi	Annular
C	13 5/8" 5,000 psi	Pipe Ram
D	13 5/8" 5,000 psi	Blind Ram
E	13 5/8" 5,000 psi	Mud Cross
F		
DSA	As required for each hole size	
C-Sec		
B-Sec	13-5/8" 5K x 11" 5K	
A-Sec	13-3/8" SOW x 13-5/8" 5K	

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 through 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: _____

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
<input type="checkbox"/>	1500 psi	1500 psi	750 psi	800 psi	700 psi
<input type="checkbox"/>	2000 psi	2000 psi	1000 psi	1100 psi	900 psi
<input type="checkbox"/>	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: _____

CHOKE MANIFOLD SCHEMATIC

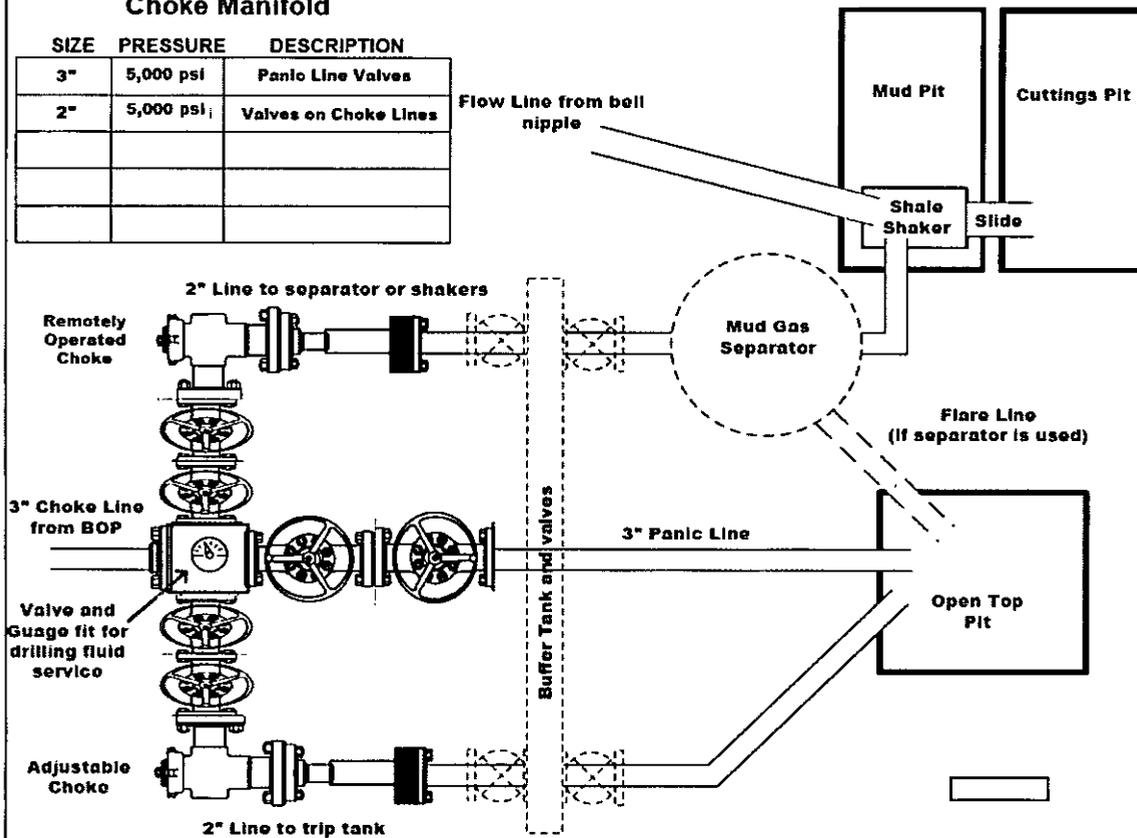
Minimum Requirements

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 tress, 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

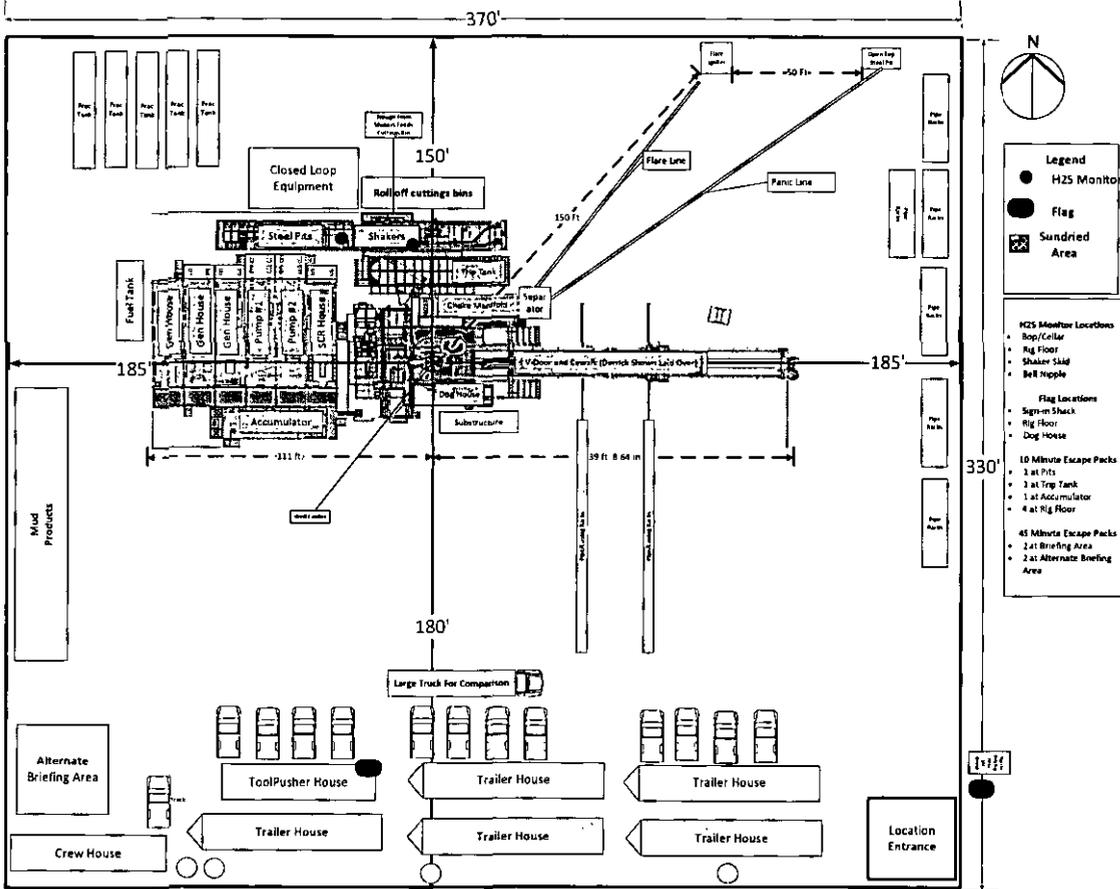
Wellname: _____

Representative: _____

Date: _____

Exhibit 6

Ensign 767 Pad Layout (330' x 370')





Midwest Hose
& Specialty, Inc.

INTERNAL HYDROSTATIC TEST CERTIFICATE		
Customer: ODESSA		Customer P.O. Number: 193072
HOSE SPECIFICATIONS		
Type: Rotary/CHOKER KILL GRADE E / API 7K	Hose Length: 25' FEET	
I.D. 3" INCHES	O.D. 4.77 INCHES	
WORKING PRESSURE 10,000 PSI	TEST PRESSURE 15,000 PSI	BURST PRESSURE N/A PSI
COUPLINGS		
Part Number E3.0X64WB E3.0X64WB	Stem Lot Number	Ferrule Lot Number L08301765 L08301765
Type of Coupling: SWAGE-IT	Die Size: 5.25	
PROCEDURE		
<i>Hose assembly pressure tested with water at ambient temperature.</i>		
TIME HELD AT TEST PRESSURE 3 1/2 MIN.		ACTUAL BURST PRESSURE: N/A PSI
Hose Assembly Serial Number: 212332	Hose Serial Number: 8104	
Comments:		
Date: 8/7/2013	Tested:	Approved: <i>Gene Alana</i>



Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

August 7, 2013

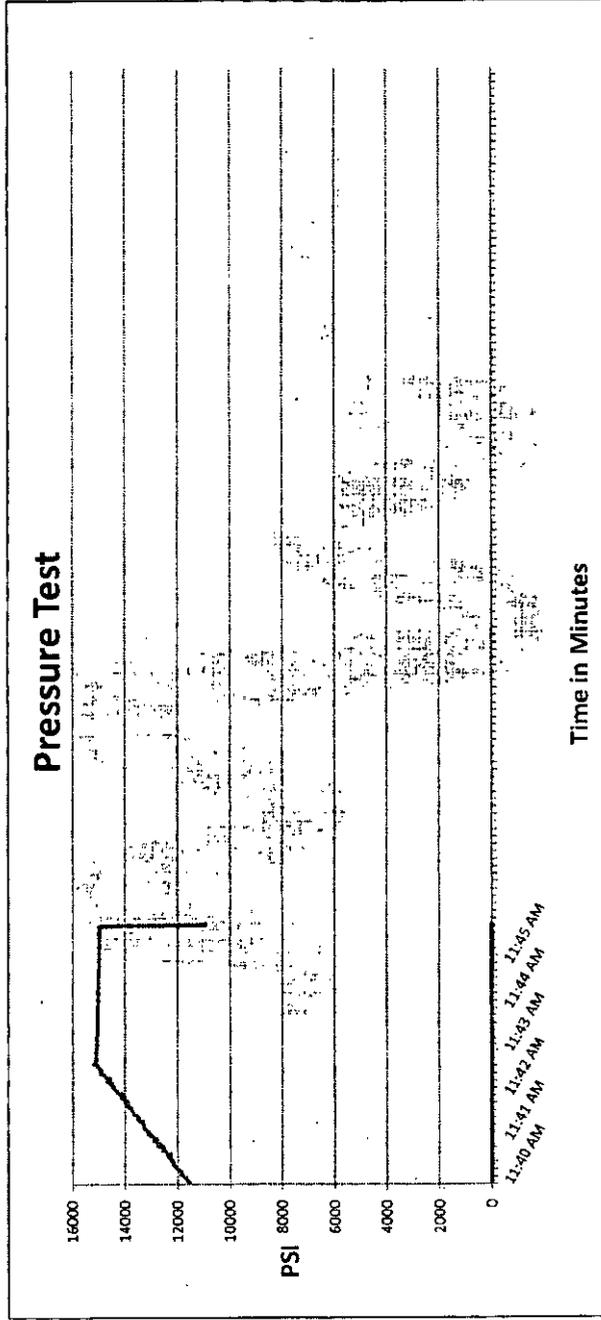
Customer: Odessa Pick Ticket #: 212332

Hose Specifications

Hose Type: E
 Length: 25'
 I.D.: 3"
 O.D.: 4.77"
 Working Pressure: 7500 PSI
 Standard Safety Multiplier Applies

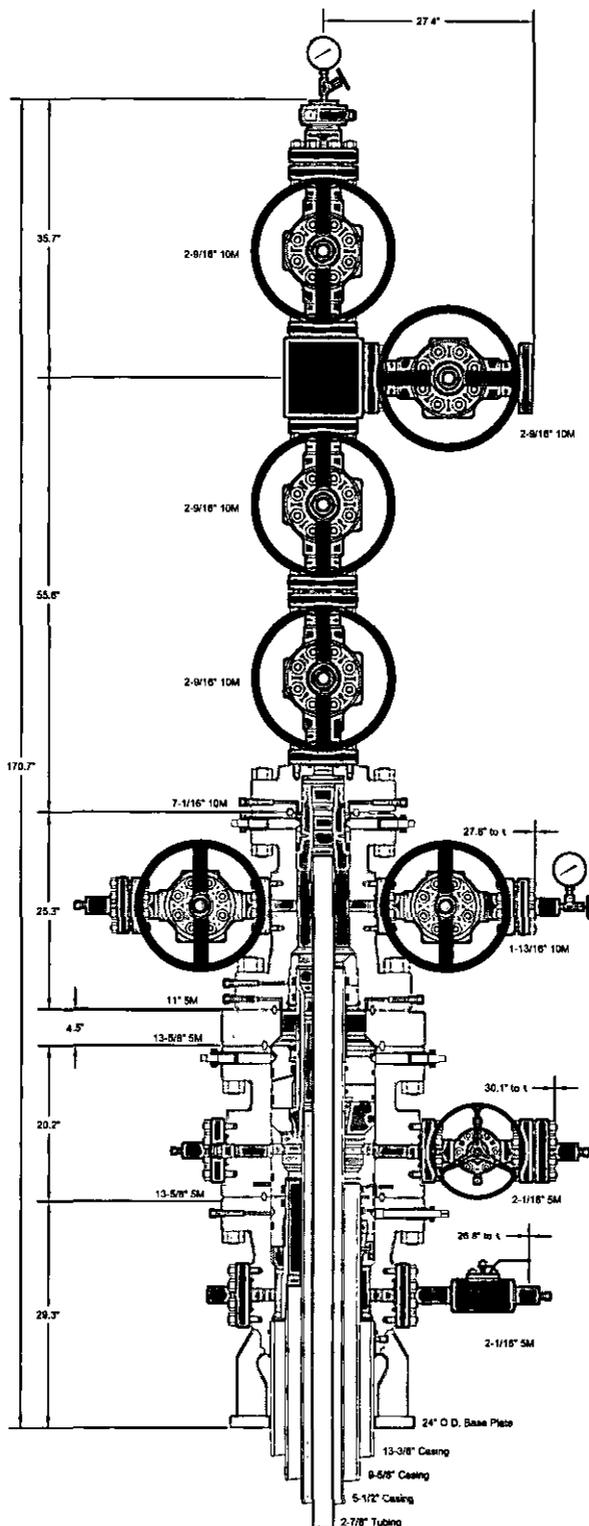
Verification

Type of Fitting: 4 1/16 10K
 Die Size: 5.25"
 Hose Serial #: 8104
 Coupling Method: Swage
 Final O.D.: 5.31"
 Hose Assembly Serial #: 212332



Test Pressure: 15000 PSI
 Time Held at Test Pressure: 3 2/4 Minutes
 Actual Burst Pressure: 15263 PSI
 Peak Pressure: 15263 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.
 Tested By: Ryan Malone
 Approved By: Ryan Adams



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

CHEVRON USA, INC.
DELAWARE BASIN

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

DRAWN	VJK	19MAR13
APPRV	KN	19MAR13

FOR REFERENCE ONLY
DRAWING NO. AE23705



H₂S Preparedness and Contingency Plan Summary

- HH SO 12 Fed Com 1H

Training

MCBU Drilling and Completions H₂S 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 H₂S.

Awareness Level

Employees and visitors to MCBU Drilling and Completions locations that have known concentrations of H₂S, who are not required to perform work in H₂S areas, will be provided with an awareness level of H₂S training prior to entering any H₂S areas. At a minimum, awareness level training will include:

1. Physical and chemical properties of H₂S
2. Health hazards of H₂S
3. Personal protective equipment
4. Information regarding potential sources of H₂S
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 H₂S Training

Employees and contractors required to work in areas that may contain H₂S will be provided with Advanced Level H₂S training prior to initial assignment. In addition to the Awareness Level requirements, Advanced Level H₂S training will include:

1. H₂S safe work practice procedures;
2. Emergency contingency plan procedures;
3. Methods to detect the presence or release of H₂S (e.g., alarms, monitoring equipment), including hands-on training with direct reading and personal monitoring H₂S equipment.
4. Basic overview of respiratory protective equipment suitable for use in H₂S 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 H₂S training;
6. Proficiency examination covering all course material.

Advanced H₂S training courses will be instructed by personnel who have successfully completed an appropriate H₂S train-the-trainer development course (ANSI/ASSE Z390.1-2006) or who possess significant past experience through educational or work-related background.



H₂S Preparedness and Contingency Plan Summary

H₂S Training Certification

All employees and visitors will be issued an H₂S training certification card (or certificate) upon successful completion of the appropriate H₂S training course. Personnel working in an H₂S environment will carry a current H₂S training certification card as proof of having received the proper training on their person at all times.

Briefing Area

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

H₂S 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.

H₂S Detection and Monitoring System

- a) H₂S 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.



H₂S Preparedness and Contingency Plan Summary

Well Control Equipment

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

Mud Program

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

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

Public Safety - Emergency Assistance

<u>Agency</u>	<u>Telephone Number</u>
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

-
-

H₂S Preparedness and Contingency Plan Summary

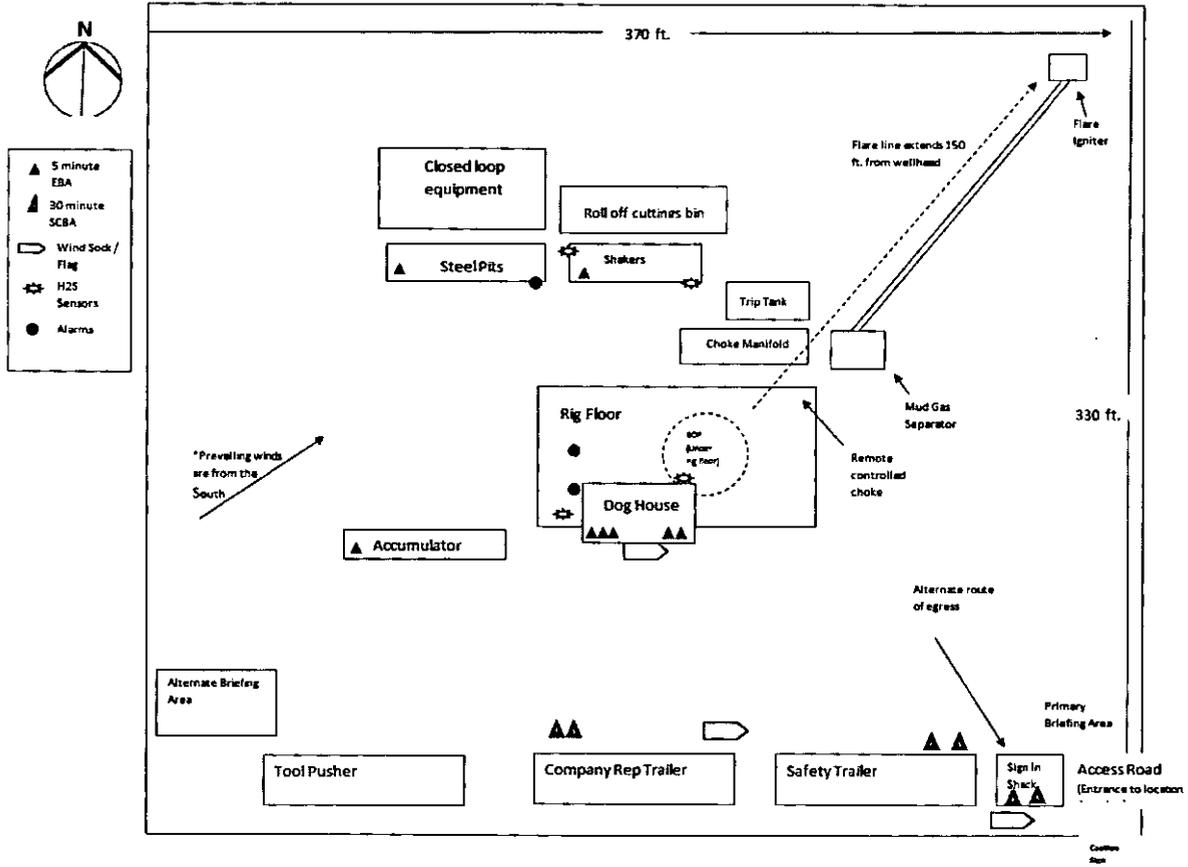


Chevron MCBU D&C Emergency Notifications

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

	Name	Title	Office Number	Cell Phone
1.	Serik Seitassanov	Drilling Engineer	(713) 372-0453	(832) 581-8145
2.	Phil Clark	Superintendent	(713) 372-7588	(832) 741-4175
5.	Kim McHugh	Drilling Manager	(713) 372-7591	(713) 204- 8550
6.	Darrell Hammons	Operations Manager	(713) 372-5747	(281) 352 2302
7.	Spencer Halliday	D&C HES	(713) 372-5720	(281) 386-5781

H₂S Preparedness and Contingency Plan Summary



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.

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

- **Road Width:** The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed 14'. The maximum width of surface disturbance shall not exceed 25'.
- **Maximum Grade:** 3%
- **Crown Design:** Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2%. The road shall conform to cross section and plans for typical road construction found in the BLM Gold Book.
- **Turnouts:** 50-60'
- **Ditch Design:** Ditching will be constructed on both sides of road.
- **Cattle guards:** 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

Location of Existing Wells (Exhibit 3)

- 1-Mile radius map is attached

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

- **Facilities:** Production facilities will be in the northeast corner of SESE sec.12, T26S, R27E where oil and gas sales will take place.
 - The facility is on lease.
 - 3rd party gas purchaser has agreed to pipeline to Chevron's production facilities and will be responsible for ROW approval.
 - 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: One 3” surface flex pipeline with less than 125 psi working pressure will be laid along existing disturbances from well to production facility. A ROW will not be required.
 - All construction activity will be confined to the approved 20’ width.
 - Pipeline will run perpendicular to road and will stay within 10’ of road.
 - State boring permit will be applied for and approved prior to any road boring activity begins.
- Power lines: The permanent electrical supply route will be determined prior to construction of permanent distribution lines. A generator will be utilized until permanent power is connected.
 - Construction activity will not commence until Power line access is approved or ROW is approved.

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

- From Skeen Pond in SWSW Sec. 2 T26S-R27E

Construction Material

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

Methods for Handling Waste

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

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

Ancillary Facilities

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

Well Site Layout (Exhibit 6)

- Surveyor Plat
 - Exterior well pad dimensions are 370' x 330'
 - Interior well pad dimensions from point of entry (well head) are 185' E & W, 180' N, 150' S.
 - Total disturbance area needed for construction activities will be 5.64 acres
 - Topsoil placement: South side of pad
 - Cut and fill: South side of pad
- Rig Layout (Exhibit 6)

Plans for Surface Reclamation

Reclamation Objectives

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

Interim Reclamation Procedures

- Within 6 months, Chevron will contact BLM Surface Management Specialists to devise the best strategies to reduce the size of the location. Current plans for interim reclamation will consist of reclaiming the pad to +/-50 feet outside the anchors, or approximately 200 x 200 feet.
- Within 30 days of well completion, the well location and surrounding areas will be cleared of, and maintained free of, all materials, trash, and equipment not required for production. A plan will be submitted showing where interim reclamation will be completed in order to allow for safe operations, protection of the environment outside of drilled well, and following best management practices found in the BLM "Gold Book".
- In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.
- The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.
- Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts & fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used.
- Proper erosion control methods will be used on the area to control erosion, runoff and siltation of the surrounding area.
- The interim reclamation will be monitored periodically to ensure that vegetation has reestablished

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

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

Surface Ownership

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

- Phone Number
- The operator must certify that they have provided a copy of the Surface Use Plan of Operations of the APD to the private surface owner or that they made a good faith effort if unable to provide the document to the surface owner.
- **Nearest Post Office:** Malaga Post Office; 15.4 Miles north

Other Information

- On-site performed by BLM NRS: John Bell 11/10/14
- 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: Rolling hills amidst flat areas
- Soil: Reeves-Reagan loams and Ector stony loam, very shallow
- Vegetation: Vegetation present in surrounding area includes creosote, mesquite, pencil cholla, cane cholla, prickly pear, yucca, althorn, horse crippler cacti and assorted grasses.
- Wildlife: No wildlife observed, but it is likely that deer, rabbits, coyotes, and rodents pass through the area.
- Surface Water: There are no ponds, lakes, streams, or rivers within several miles of proposed location
- Cave Karst: None known
- Watershed Protection: The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants 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.

Chevron Representatives

Primary point of contact:

Jennifer Van Curen

Jennifer.VanCuren@arcadis-us.com

M- 432-270-8753

Chevron Functional Contacts

<p>Project Manager Name: Danny Boone Address: 1400 Smith Street Houston, TX 77002 Phone: (713) 372-5390 Email: dboone@chevron.com</p>	<p>Drilling Engineer Name: Serik Seitassanov Address: 1400 Smith Street Houston, TX 77002 Phone: (713) 372-0453 Email: Serik.Seitassanov@chevron.com</p>
<p>Surface Land Representative Name: Kevin Dickerson Address: 15 Smith Road Midland Texas 79705 Phone: (432) 687-7104 Email: Kevin.Dickerson@chevron.com</p>	<p>Facility Lead Name: Christopher Smith Address: 15 Smith Road Midland, Texas 79705 Phone: (432) 687-7249 Email: Christopher.smith@chevron.com</p>
<p>Geologist Name: Jeff Fabre Address: 1400 Smith Street Houston, TX 77002 Phone: (713) 372-0523 Email: JeffreyFabre@chevron.com</p>	<p>Regulatory Specialist Denise Pinkerton Address: 15 Smith Road, Midland, TX 79705 Office: (432) 687-7375 Email: leakejd@chevron.com</p>

EXHIBITS:

Exhibit 1 -- Existing Roads

Exhibit 2 -- Survey Plat: New or Reconstructed Roads Map: if road is outside 600' x 600'.

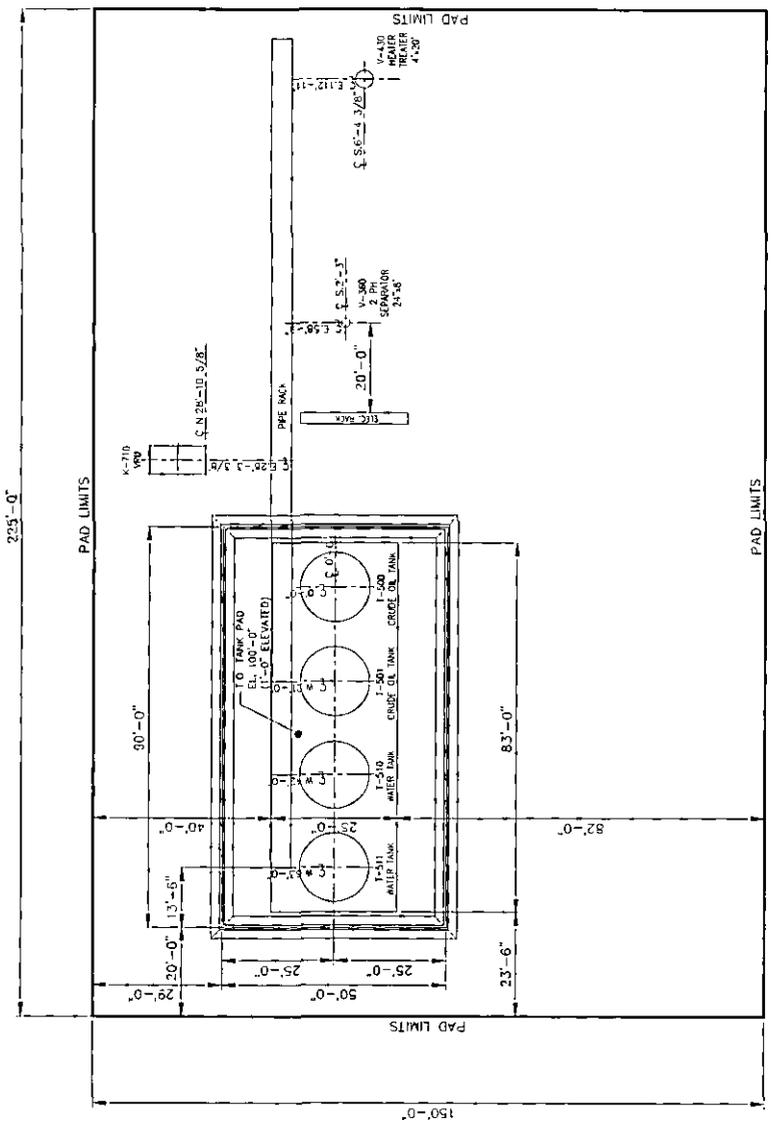
Exhibit 3 -- 1-mile Radius Map

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

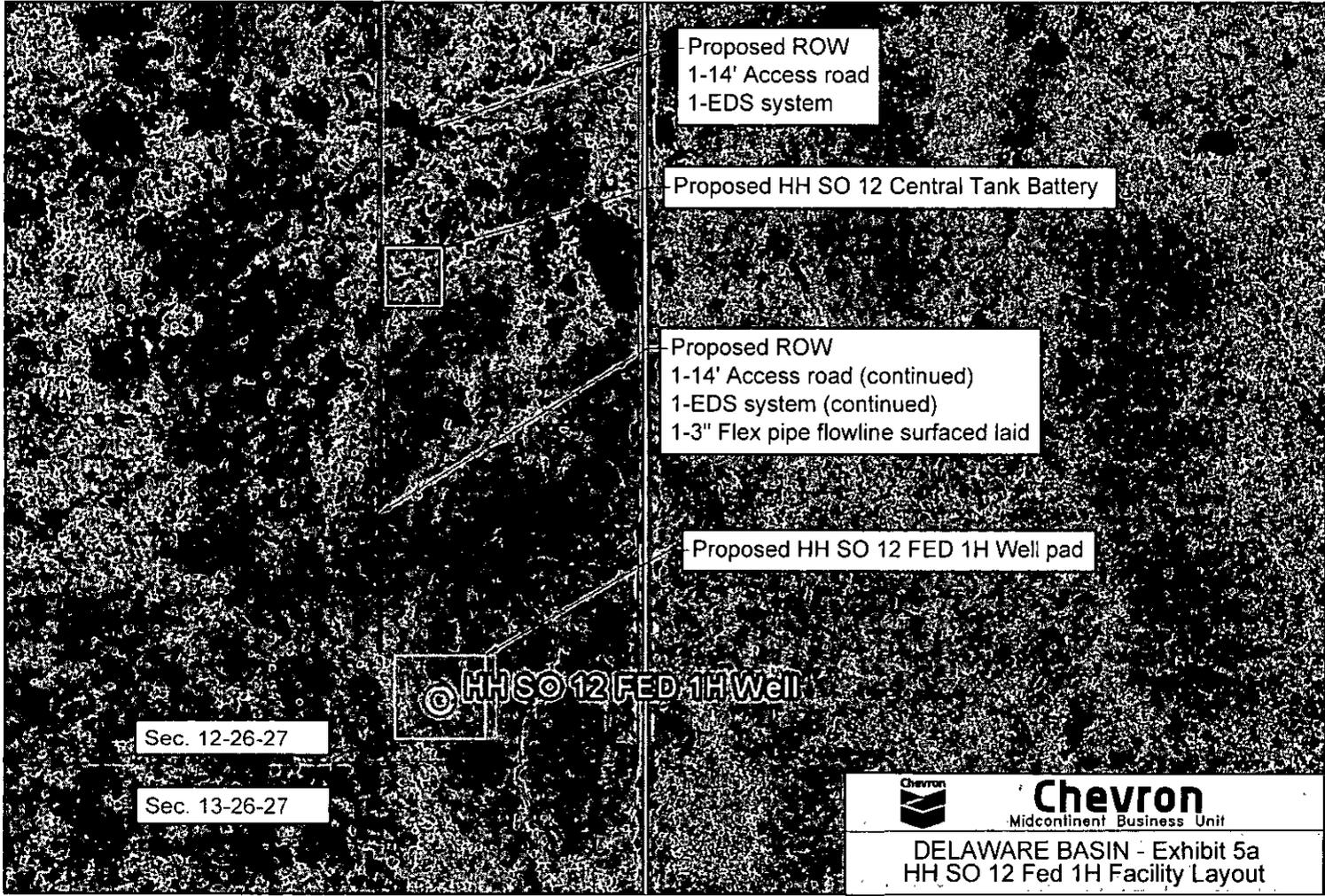
Exhibit 5 -- Survey Plat: Infrastructure: roads, pipelines, power lines, frac pond

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

Exhibit 4



ISSUED FOR CONSTRUCTION 4 MARCH 2024	METERS 3/28/24	METERS 3/28/24	METERS 3/28/24	METERS 3/28/24	METERS 3/28/24
ISSUED FOR CONSTRUCTION		Chevron U.S.A. Inc.			
GOMEZ-TEX33-1-CIV-PLT-MCB-01		PLOT PLAN			
LEASE		API			
HHSO 912 Fed 1110 Exhibit 4 ASIN TEXAS 33-1 - Pecos County, TEXAS		HHSO 912 Fed 1110 Exhibit 4 ASIN TEXAS 33-1 - Pecos County, TEXAS			



Proposed ROW
1-14' Access road
1-EDS system

Proposed HH SO 12 Central Tank Battery

Proposed ROW
1-14' Access road (continued)
1-EDS system (continued)
1-3" Flex pipe flowline surfaced laid

Proposed HH SO 12 FED 1H Well pad

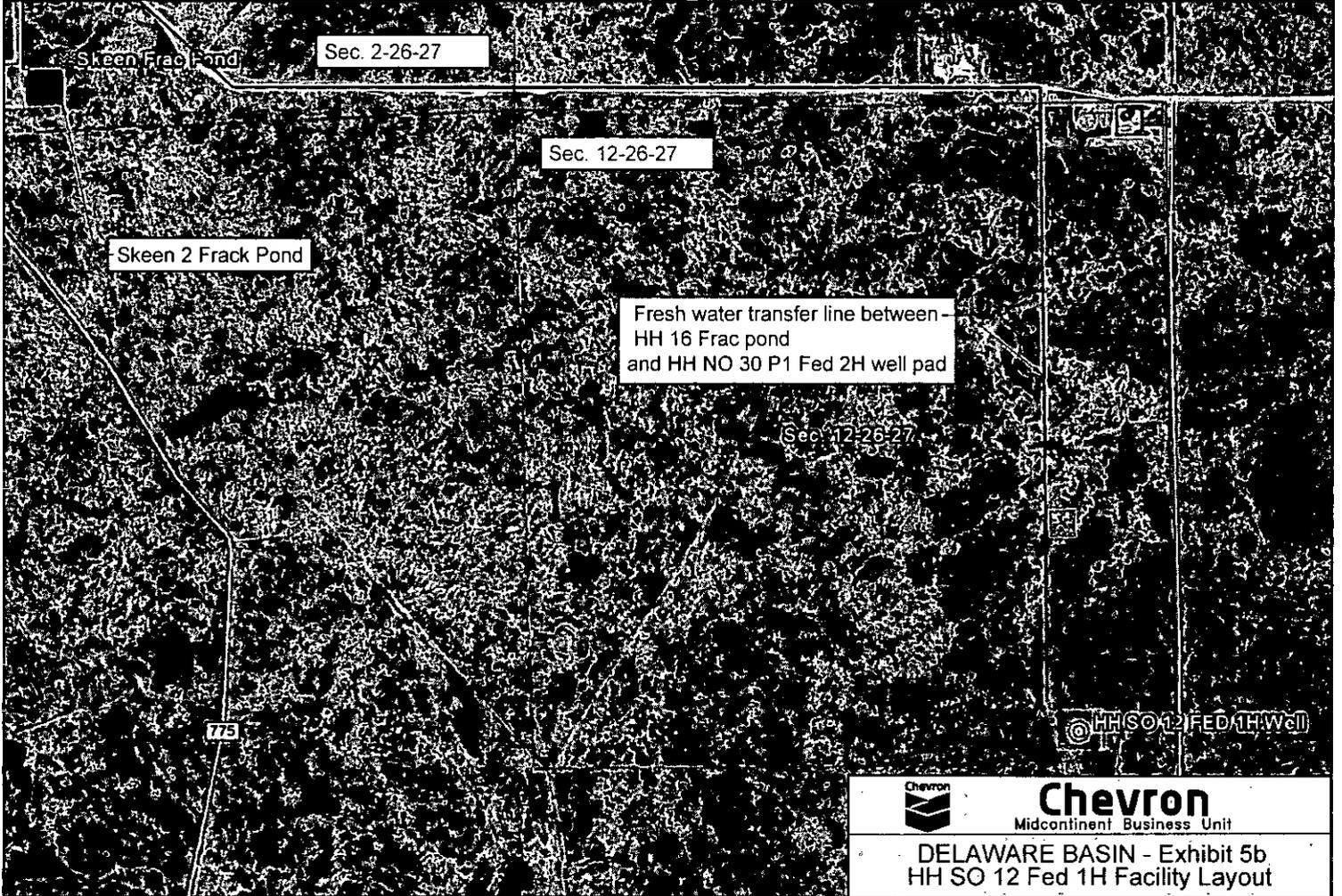
© HH SO 12 FED 1H Well

Sec. 12-26-27

Sec. 13-26-27

 **Chevron**
Midcontinent Business Unit

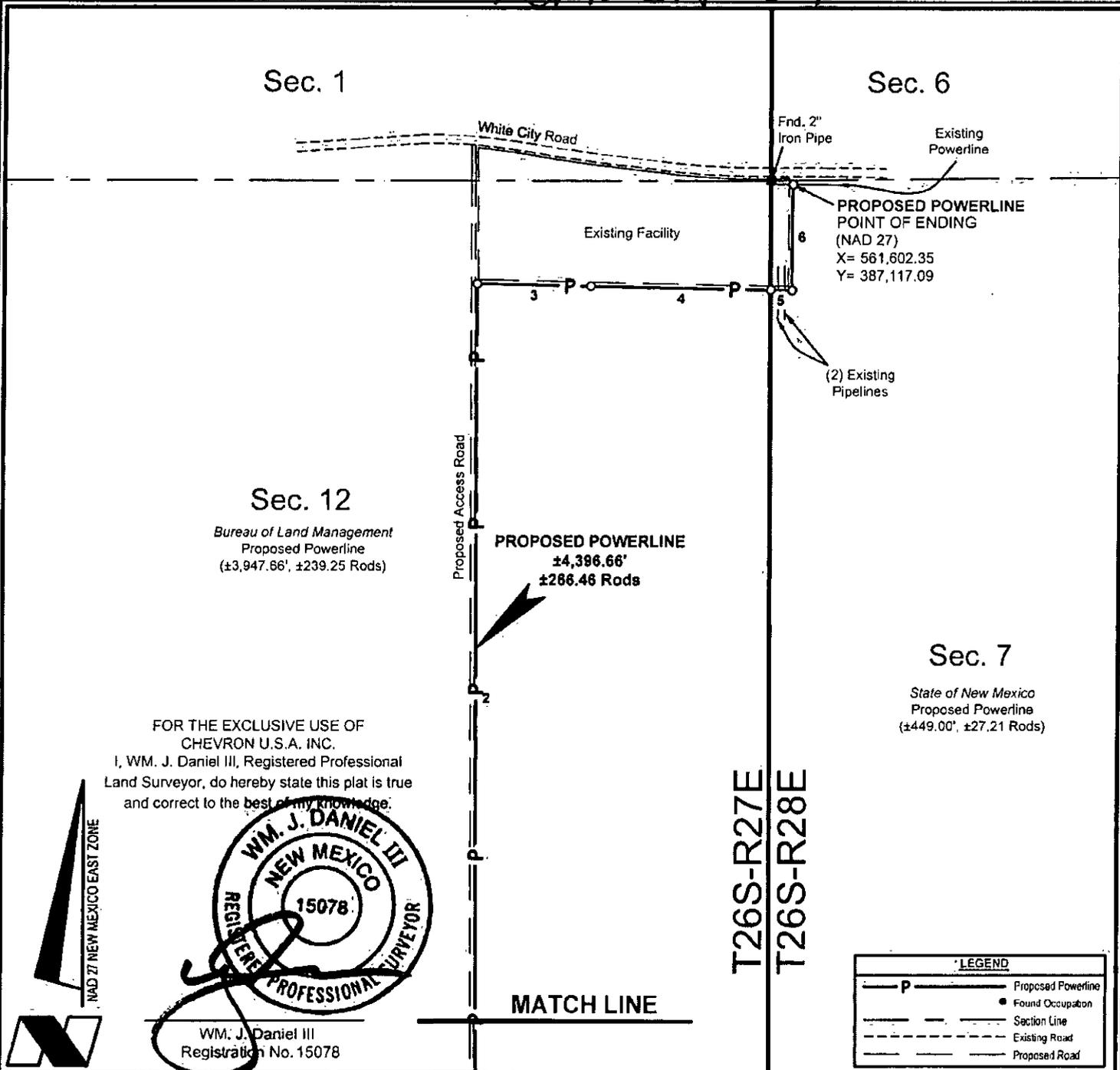
DELAWARE BASIN - Exhibit 5a
HH SO 12 Fed 1H Facility Layout



Chevron
Midcontinent Business Unit

DELAWARE BASIN - Exhibit 5b
HH SO 12 Fed 1H Facility Layout

Exhibit 5b



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

Sec. 12
Bureau of Land Management
Proposed Powerline
(±3,947.66', ±239.25 Rods)

PROPOSED POWERLINE
POINT OF ENDING
(NAD 27)
X= 561,602.35
Y= 387,117.09

PROPOSED POWERLINE
±4,396.66'
±266.46 Rods

Sec. 7
State of New Mexico
Proposed Powerline
(±449.00', ±27.21 Rods)



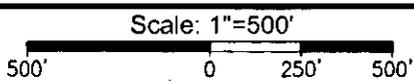
WM. J. Daniel III
Registration No. 15078

T26S-R27E
T26S-R28E

LEGEND	
	Proposed Powerline
	Found Occupation
	Section Line
	Existing Road
	Proposed Road

MATCH LINE

SURFACE USE PLAT



CHEVRON U.S.A. INC.
PROPOSED POWERLINE & FLOWLINE
HH SO 12 FED COM NO. 1H WELL
SECTION 7, T26S-R28E & SECTION 12, T26S-R27E
EDDY COUNTY, NEW MEXICO

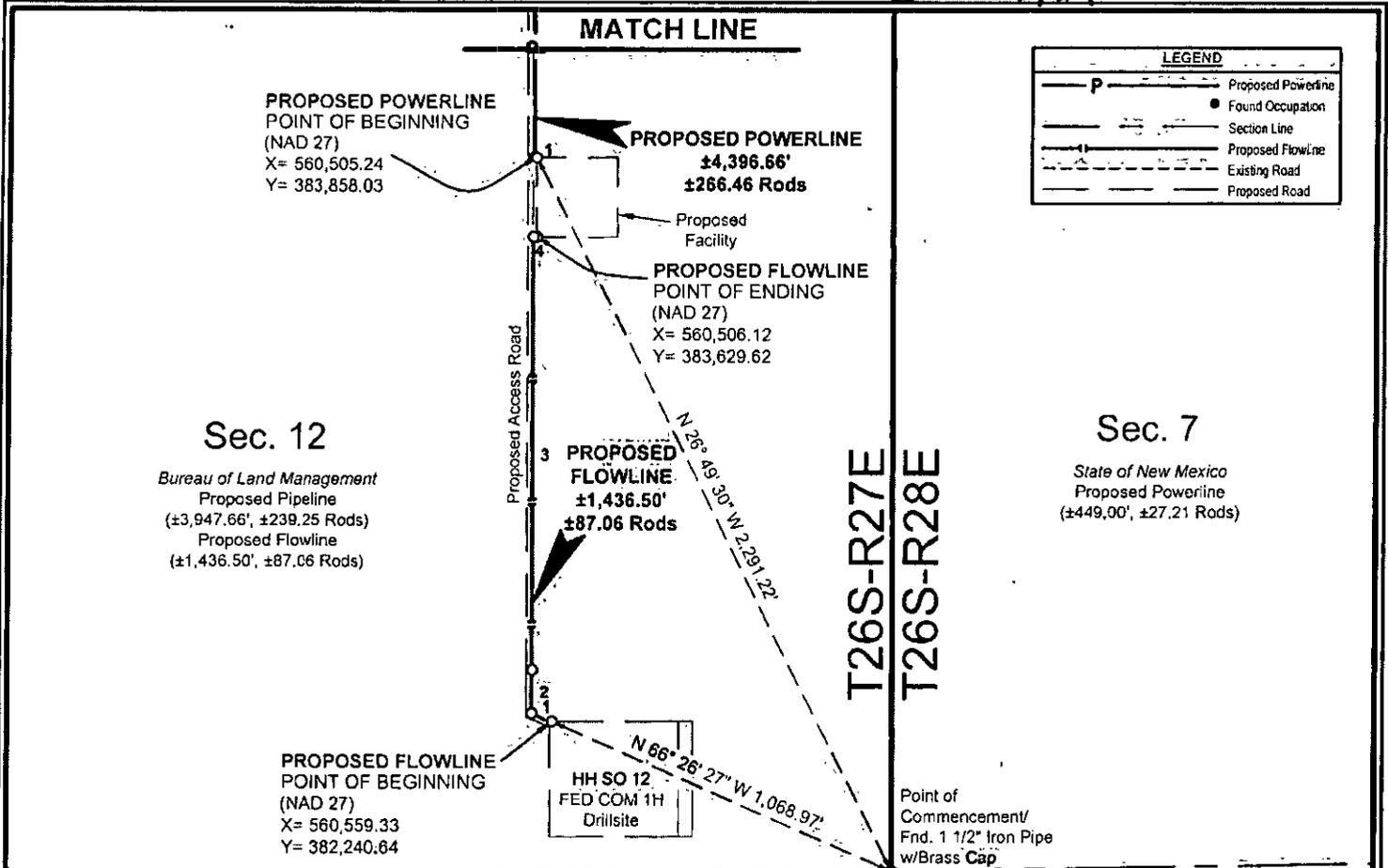
PAGE 1 OF 3



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.	DATE:	REVISED BY:
DATE: 01/09/2015	No.	DATE:	REVISED BY:
FILENAME: T:\2014\2148329\DWG\HH SO 12 FED 1H FLOWLINE_POWER.dwg			

#5b CONT



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

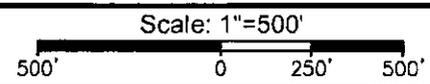


Sec. 13

Sec. 18

T27S-R26E
T27S-R27E

SURFACE USE PLAT



CHEVRON U.S.A. INC.
PROPOSED POWERLINE & FLOWLINE
HH SO 12 FED COM NO. 1H WELL
SECTION 7, T26S-R28E & SECTION 12, T26S-R27E
EDDY COUNTY, NEW MEXICO

PAGE 2 OF 3



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.	DATE:	REVISED BY:
DATE: 01/09/2015	No.	DATE:	REVISED BY:
FILENAME: T:\2014\2148329\DWG\HH SO 12 FED 1H FLOWLINE_POWER.dwg			

#56 CONT

DISCLAIMER: At this time, C.H. Fenstermaker & Associates, LLC 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:

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.

**METES AND BOUNDS DESCRIPTION OF A
PROPOSED FLOWLINE
LOCATED IN SECTION 12, T26S-R27E
EDDY COUNTY, NEW MEXICO**

HH SO 12 FED COM 1H FLOWLINE

Survey of a proposed flowline 1,436.50 feet or 87.06 rods in length crossing Bureau of Land Management land in Section 12, T26S-R27E, Eddy County, New Mexico.

COMMENCING at the Southeast corner of said Section 12, at a found 1 1/2" iron pipe with brass cap; **THENCE** North 66 degrees 26 minutes 27 seconds West 1,068.97 feet to the **POINT OF BEGINNING**, Said **POINT OF BEGINNING** having the following coordinates: X= 560,559.33, Y= 382,240.64 (New Mexico State Plane Coordinate System, East Zone, NAD 27).

THENCE North 67 degrees 24 minutes 50 seconds West 62.65 feet;
THENCE North 00 degrees 15 minutes 40 seconds East 123.92 feet;
THENCE North 00 degrees 13 minutes 34 seconds West 1,240.98 feet;
THENCE North 89 degrees 46 minutes 26 seconds East 8.96 feet to the **POINT OF ENDING**; Said **POINT OF ENDING** having the following coordinates: X= 560,506.12, Y= 383,629.62 (New Mexico State Plane Coordinate System, East Zone, NAD 27).

* The above descriptions represent a survey made on the ground for a Right of Way easement and intended solely for that purpose. Descriptions do not represent a boundary survey.

**METES AND BOUNDS DESCRIPTION OF A
PROPOSED POWERLINE
LOCATED IN SECTION 12, T26S-R27E AND SECTION 7, T26S-R28E
EDDY COUNTY, NEW MEXICO**

HH SO 12 FED COM 1H POWERLINE

Survey of a proposed powerline 4,396.66 feet or 266.46 rods in length crossing Bureau of Land Management and State of New Mexico land in Section 12, T26S-R27E and Section 7, T26S-R28E, Eddy County, New Mexico.

COMMENCING at the Southeast corner of said Section 12, at a found 1 1/2" iron pipe with brass cap; **THENCE** North 26 degrees 49 minutes 30 seconds West 2,291.22 feet to the **POINT OF BEGINNING**, Said **POINT OF BEGINNING** having the following coordinates: X= 560,505.24, Y= 383,858.03 (New Mexico State Plane Coordinate System, East Zone, NAD 27).

THENCE North 56 degrees 24 minutes 17 seconds West 6.00 feet;
THENCE North 00 degrees 13 minutes 34 seconds West 2,905.76 feet;
THENCE South 88 degrees 50 minutes 34 seconds East 400.60 feet;
THENCE South 88 degrees 53 minutes 45 seconds East 635.29 feet to a common section line of said section 12, T26S-R27E and section 7, T26S-R28E;
THENCE South 88 degrees 53 minutes 45 seconds East 77.18 feet;
THENCE North 00 degrees 06 minutes 39 seconds East 371.82 feet to the **POINT OF ENDING**; Said **POINT OF ENDING** having the following coordinates: X= 561,602.35, Y= 387,117.09 (New Mexico State Plane Coordinate System, East Zone, NAD 27).

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

PROPOSED FLOWLINE		
COURSE	BEARING	DISTANCE
1	N 67° 24' 50" W,	62.65'
2	N 00° 15' 40" E,	123.92'
3	N 00° 13' 34" W	1240.98'
4	N 89° 46' 26" E	8.96'

PROPOSED POWERLINE		
COURSE	BEARING	DISTANCE
1	N 56° 24' 17" W	6.00'
2	N 00° 13' 34" W	2905.76'
3	S 88° 50' 34" E	400.60'
4	S 88° 53' 45" E	635.29'
5	S 88° 53' 45" E	77.18'
6	N 00° 06' 39" E	371.82'



WM. J. Daniel III
 Registration No. 15078

SURFACE USE PLAT

CHEVRON U.S.A. INC.
PROPOSED POWERLINE & FLOWLINE
HH SO 12 FED COM NO. 1H WELL
SECTION 7, T26S-R28E & SECTION 12, T26S-R27E
EDDY COUNTY, NEW MEXICO



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. _____	DATE: _____	REVISED BY: _____	
DATE: 01/09/2015	No. _____	DATE: _____	REVISED BY: _____	
FILENAME: T:\2014\2148329\DWG\HH SO 12 FED 1H FLOWLINE_POWER.dwg				

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 06th day of February, 2015
Name: Danny Boone
Danny Boone – Project Manager

Address: 1400 Smith Street
Houston, TX 77002
Room 40135
Office: 713-372-5390
E-mail: DBPR@CHEVRON.COM

NMCRIS No.: 132665

NMCRIS INVESTIGATION ABSTRACT FORM (NIAF)

1. NMCRIS Activity No.: 132665	2a. Lead Agency: US Bureau of Land Management Carlsbad Field Office (BLM/CFO)	2b. Other Agency(ies):	3. Lead Agency Report No.:
--	---	-------------------------------	-----------------------------------

4. Title of Report: A Class III Archaeological Survey for Chevron U.S.A. Inc.'s Proposed HH SO 12 Fed Com #1H Well, Facility, and Access Road. Author(s) Hermann, Willi and M. Jones	5. Type of Report <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Positive
---	---

6. Investigation Type

Research Design Archaeological Survey/Inventory Architectural Survey/Inventory Test Excavation Excavation
 Collections/Non-Field Study Compliance Decision Based on Previous Inventory Overview/Lit Review Monitoring
 Ethnographic Study Site/Property Specific Visit Historic Structures Report Other

7. Description of Undertaking (what does the project entail?):

A pedestrian cultural resources survey was conducted on 27 Jan 2015 for Chevron U.S.A. Inc.'s proposed HH SO 12 Fed Com #1H Well, Facility, and Access Rd. The proposed project area lies in Eddy County, NM on federal lands managed by the BLM/CFO in S1 (SE ¼ SE ¼) and S12 (NE ¼ NE ¼) (SE ¼ NE ¼) (NE ¼ SE ¼) (SE ¼ SE ¼) of T26S R27E. The project area of potential effect measures: well pad – 370 ft. x 330 ft. (122,100 sq. ft.) or 2.80 acres, facility – 230 ft. x 230 ft. (52,900 sq. ft.) or 1.21 acres, and access rd. – 5,059.5 ft. x 30 ft. (151,785 sq. ft.) or 3.48 acres. The survey area measures: well pad – 600 ft. x 600 ft. (360,000 sq. ft.) or 8.26 acres, facility – 430 ft. x 430 ft. (184,900 sq. ft.) or 4.24 acres, and access rd. – 4,497.5 ft. x 200 ft. (899,500 sq. ft.) or 20.65 acres. The APE and cultural buffer were surveyed using 15 m (50 ft.) parallel transects. Although no significant cultural resources were recorded or updated during the survey, six isolated occurrences (IOs) were found and recorded.

[] Continuation

8. Dates of Investigation: from: 27-Jan-2015 to: 27-Jan-2015	9. Report Date: 03-Feb-2015
---	------------------------------------

10. Performing Agency/Consultant: Boone Arch Services of NM, LLC
Principal Investigator: Hill, Rebecca L.
Field Supervisor: Hermann, Willi
Field Personnel Names: Hermann, Willi
Historian / Other:

11. Performing Agency/Consultant Report No.:
BASNM 01-15-57

12. Applicable Cultural Resource Permit No(s):
BLM Permit No.: 190-2920-14-T

NMCRIS No.: 132665

13. Client/Customer (project proponent):

Chevron U.S.A. Inc.

Contact: Kevin Dickerson

Address: 15 Smith Rd., Midland, TX 79705

Phone: 432-687-7104

14. Client/Customer Project No.:

15. Land Ownership Status (must be indicated on project map):

Land Owner (By Agency)

Acres Surveyed Acres in APE

US Bureau of Land Management Carlsbad Field Office	33.15	7.49
TOTALS	33.15	7.49

16. Records Search(es):

Date(s) of HPD/ARMS File Review: 26 Jan 2015	Name of Reviewer(s): W. Hermann	
Date(s) of Other Agency File Review: 26 Jan 2015	Name of Reviewer(s): W. Hermann	Agency: BLM/CFO

17. Survey Data:

a. Source Graphics [] NAD 27 [X] NAD 83 Note: NAD 83 is the NMCRIS standard.

USGS 7.5' (1:24,000) topo map Other topo map, Scale:

GPS Unit Accuracy <1.0m 1-10m 10-100m >100m Aerial Photo(s)

Other Source Graphic(s):

b. USGS 7.5' Topographic Map Name

USGS Quad Code

Cottonwood Hills, NM	32104-A2
----------------------	----------

c. County(ies): Eddy

d. Nearest City or Town: Malaga, NM

e. Legal Description:

Township (N/S)

Range (E/W)

Section

26S	27E	1
26S	27E	12

Projected legal description? [] Yes [X] No [] Unplatted

f. Other Description (e.g. well pad footages, mile markers, plats, land grant name, etc.):

T26S R27E S12
249' FSL 800' FEL

[] Continuation

18. Survey Field Methods:

Intensity: 100% coverage <100% coverage

NMCRIS No.: 132665

Configuration: block survey units linear survey units (l x w): 4497.5 ft. x 200 ft.

other survey units (specify):

Scope: non-selective (all sites/properties recorded) selective/thematic (selected sites/properties recorded)

Coverage Method: systematic pedestrian coverage

other method (describe):

Survey Interval (m): 15 Crew Size: 1 Fieldwork Dates: from: 27-Jan-2015 to: 27-Jan-2015

Survey Person Hours: 4.00 Recording Person Hours: Total Hours: 4.00

Additional Narrative:

The proposed project area lies within one-quarter mile of one previously recorded archaeological site: LA 73729. The project is at a distance sufficient to avoid impacting the site. For additional information about the site, see Table 1, page 5.

[] Continuation

19. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.):

According to the Natural Resources Conservation Service's online database, the project area soil is a combination of Reeves-Reagan loams and Ector stony loam, very shallow. These soils support tobosa, black grama, and blue grama as the dominant species with burrograss, threeawns, and fluffgrass where the soil is shallowest. Grass cover is uniformly distributed with few large bare areas with rock fragments where the soil is shallowest. Shrubs are sparse and evenly distributed. The current vegetative community consists of creosote, mesquite, pencil cholla, cane cholla, prickly pear, yucca, althorn, and horse creeper cacti. The project area lies amidst rolling hills with a few flat areas.

The project area lies approximately 1.2 miles north of Owl Draw, 3.2 miles south of Red Bluff Draw, and 10.4 miles east of Ben Slaughter Draw. The Pecos River lies approximately 7.2 miles to the east.

[] Continuation

20.a. Percent Ground Visibility: 40 – 80 % b. Condition of Survey Area (grazed, bladed, undistributed, etc.):

The survey for the access road begins at White City road. Other than signs of cattle grazing the survey area was undisturbed.

[] Continuation

21. CULTURAL RESOURCE FINDINGS Yes, see next report section No, discuss why:

Although no significant cultural resources were recorded or updated during the survey, six IOs were found and recorded. For more information on the IOs, see Table 2, page 5.

[] Continuation

22. Attachments (check all appropriate boxes):

[X] USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn (required)

[X] Copy of NMCRIS Map Check (required)

[] LA Site Forms - new sites (with sketch map & topographic map) if applicable

[] LA Site Forms (update) - previously recorded & un-relocated sites (first 2 pages minimum)

[] Historic Cultural Property Inventory Forms, if applicable

[] List and Description of Isolates, if applicable

[] List and Description of Collections, if applicable

23. Other Attachments:

[] Photographs and Log

[X] Other Attachments
(Describe): BLM Map

NMCRIS No.: 132665

24. I certify the information provided above is correct and accurate and meets all applicable agency standards.

Principal Investigator/Qualified Supervisor: Printed Name: Hill, Rebecca L.

Signature:

Date: 4/16/2015 Title: Principal Investigator

25. Reviewing Agency

Reviewer's Name/Date:

Accepted []

Rejected []

26. SHPO

Reviewer's Name/Date:

HPD Log #:

Date sent to ARMS:

CULTURAL RESOURCE FINDINGS

[fill in appropriate section(s)]

SURVEY RESULTS:

Archaeological Sites discovered and registered: 0

Archaeological Sites discovered and NOT registered: 0

Previously recorded archaeological sites revisited (site update form required): 0

Previously recorded archaeological sites not relocated (site update form required): 0

TOTAL ARCHAEOLOGICAL SITES (visited & recorded): 0

Total isolates recorded: 6

Non-selective isolate recording?

HCPI properties discovered and registered: 0

HCPI properties discovered and NOT registered: 0

Previously recorded HCPI properties revisited: 0

Previously recorded HCPI properties not relocated: 0

TOTAL HCPI PROPERTIES (visited & recorded, including acequias): 0

MANAGEMENT SUMMARY:

While no significant cultural resources were recorded or updated during the survey, six IOs were noted and recorded. IOs are not eligible for the National Register of Historic Places and no treatment is recommended; therefore, the project is recommended for approval as staked.

If cultural materials are encountered during construction, work should be halted and archaeologists with BLM/CFO should be notified immediately.

[] Continuation

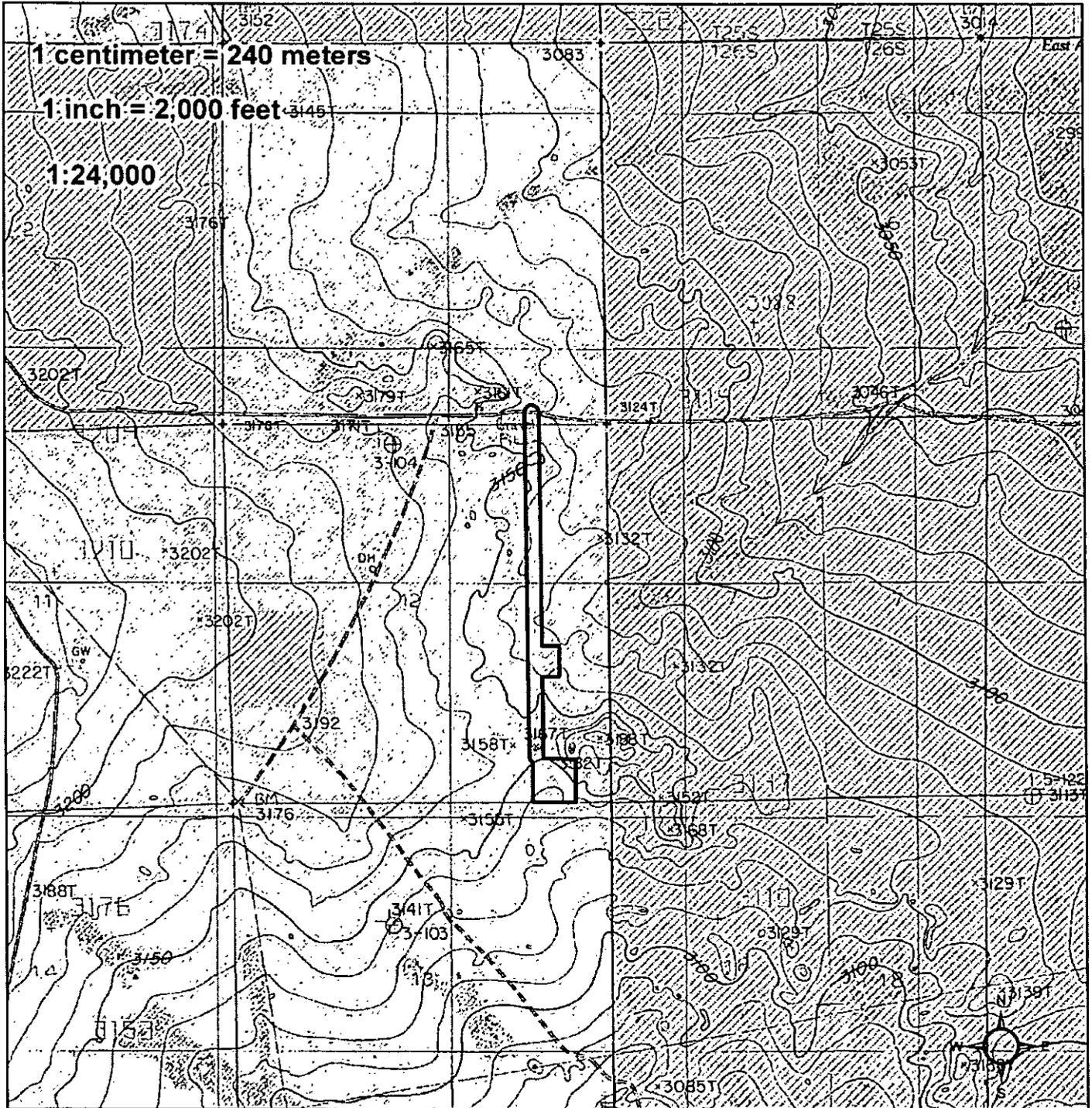
IF REPORT IS NEGATIVE, YOU ARE DONE AT THIS POINT.

SURVEY LA/HCPI NUMBER LOG

Sites/Properties Discovered:

LA/HCPI No. Field/Agency No. Eligible? (Y/N/U, applicable criteria)

Chevron U.S.A. Inc.
 HH SO 12 Fed Com #1H Well, Facility, and Access Road



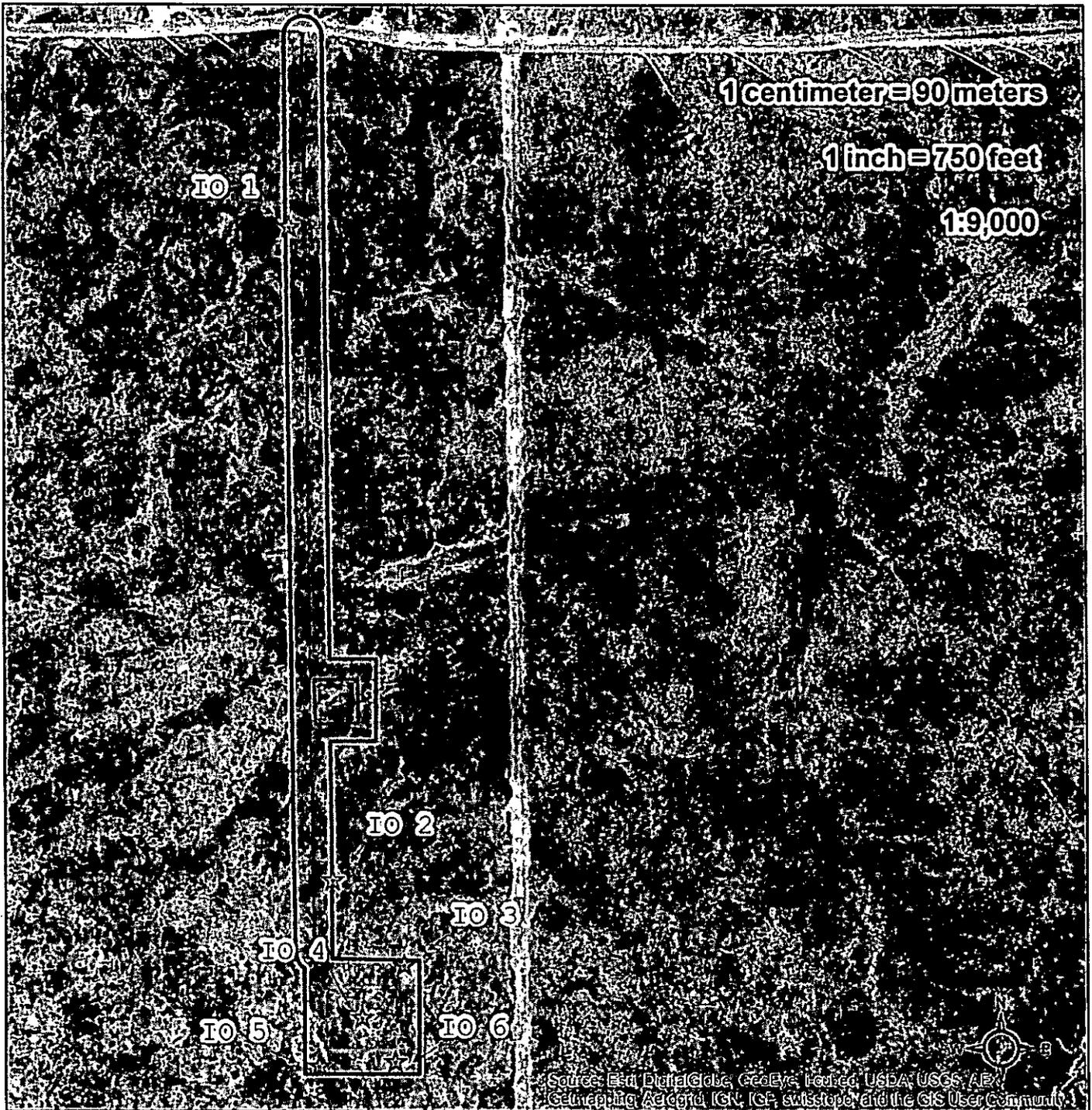
Legend

- | | | |
|----------------|----------------------|----------------------|
| Arms Submittal | BLM | NPS |
| BOR | DOE | Private |
| Forest Service | NM State Trust Lands | NM State Game & Fish |
| BOI | NM State Park | |

Cottonwood Hills 32104-A2
 T26S R27E S1, 12

BASNM 01-15-57
 NMCRIS 132665

Chevron U.S.A. Inc.
HH SO 12 Fed Com #1H Well, Facility, and Access Road



Legend

- ★ IOs
- ▭ Arms Submittal
- ▭ Arch Sites

Cottonwood Hills 32104-A2
T26S R27E S1, 12

BASNM 01-15-57
NMCRIS 132665

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Chevron USA Inc
LEASE NO.:	NM116028
WELL NAME & NO.:	1H-HH SO 12 Fed Com
SURFACE HOLE FOOTAGE:	249'/S & 800'/E
BOTTOM HOLE FOOTAGE:	250'/N & 660'/E
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.

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

Avian Power line 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.

Karst

Construction Mitigation

In order to mitigate the impacts from construction activities on cave and karst resources, the following Conditions of Approval will apply to this APD:

- In the event that any underground voids are encountered during construction activities, construction activities will be halted and the BLM will be notified immediately.
- No blasting to prevent geologic structure instabilities.
- Pad Berming to minimize effects of any spilled contaminants.

Drilling Mitigation

Federal regulations and standard Conditions of Approval applied to all APDs require that adequate measures are taken to prevent contamination to the environment. Due to the extreme sensitivity of the cave and karst resources in this project area, the following additional Conditions of Approval will be added to this APD.

To prevent cave and karst resource contamination the following will be required.

Closed Mud System Using Steel Tanks with All Fluids and Cuttings Hauled Off.

- Rotary drilling with fresh water where cave or karst features are expected to prevent contamination of freshwater aquifers.
- Directional Drilling allowed after at least 100 feet below the cave occurrence zone to prevent additional impacts resulting from directional drilling.
- Lost Circulation zones logged and reported in the drilling report so BLM can assess the situation and work with the operator on corrective actions.
- Additional drilling, casing, and cementing procedures to protect cave zones and fresh water aquifers. See Drilling COAs.

Production Mitigation

In order to mitigate the impacts from production activities and due to the nature of karst terrain, the following Conditions of Approval will apply to this APD:

- Tank battery liners and berms to minimize the impact resulting from leaks.
- Leak detection system to provide an early alert to operators when a leak has occurred.
- Automatic shut off, check valves, or similar systems will be installed for pipelines and tanks to minimize the effects of line failures used in production or drilling.

Residual and Cumulative Mitigation

- Nontoxic fluorescent dyes will be added to the drilling fluid when the hole is spudded and will be circulated to the bottom of the karst layers. This provides data as part of a long-term monitoring study.
- Annual pressure monitoring will be performed by the operator. If the test results indicate a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

Plugging and Abandonment Mitigation

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.

Watershed

- The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.
- Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion.

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.

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

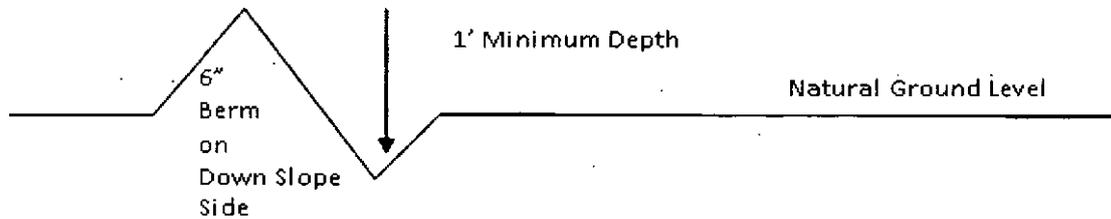
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill out-sloping and in-sloping, 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:

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

Cattleguards

An appropriately sized cattleguard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattleguards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguards that are in place and are utilized during lease operations.

Fence Requirement

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

Public Access

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

Construction Steps

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

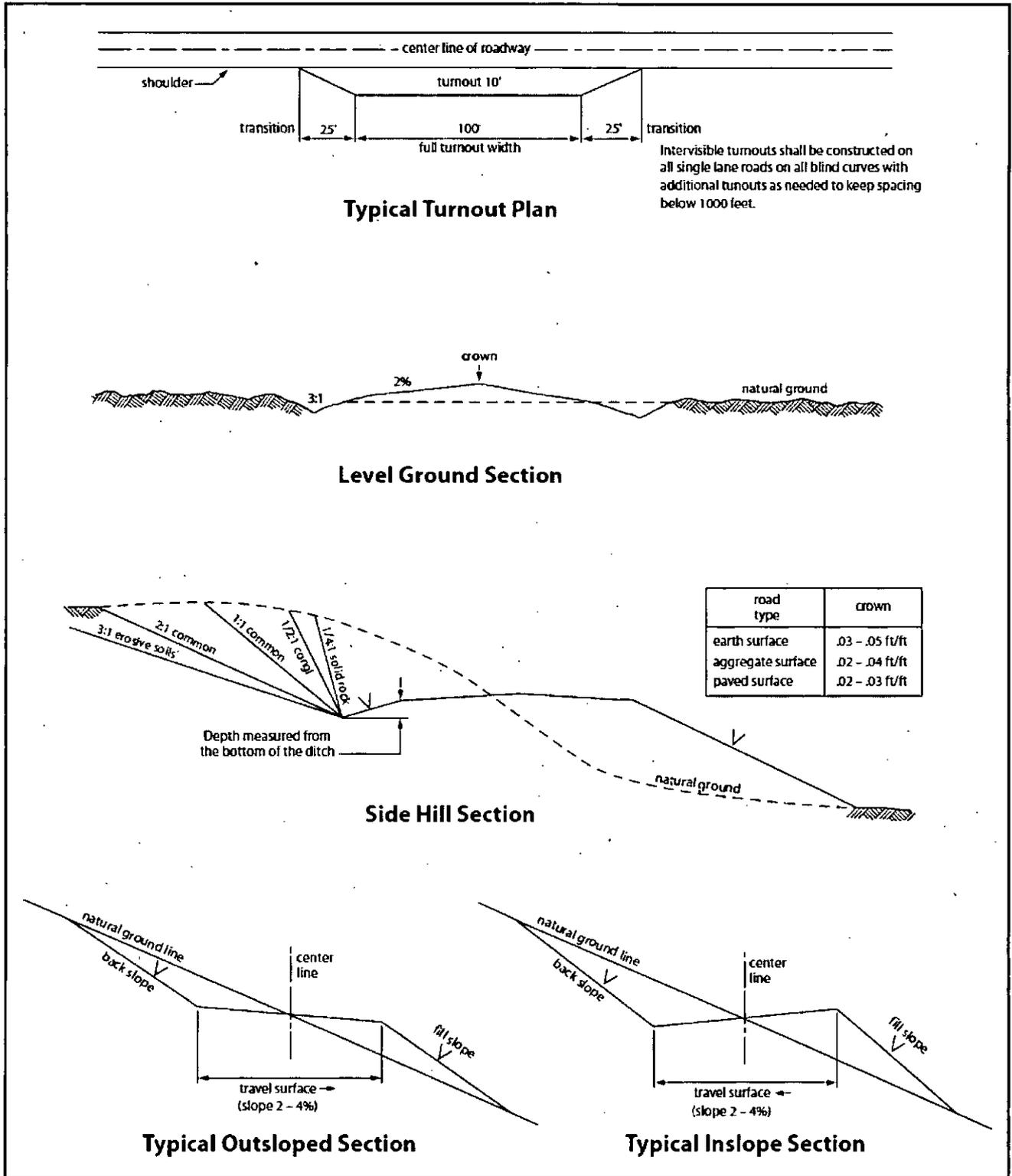


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

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

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

Eddy County

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

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

B. 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 350 feet and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

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

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.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 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.

D. DRILL STEM TEST

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

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

CRW 102815

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

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

Exclosure Netting (Open-top Tanks)

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act

of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening

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

Open-Vent Exhaust Stack Exclosures

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

Containment Structures

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

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **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 application (Grant, Sundry Notice, APD) and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM

personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

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

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

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 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 activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

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

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

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

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

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

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

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

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will 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 must be less than or equal to 4 inches and a working pressure below 125 psi.

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the 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.

IX. INTERIM RECLAMATION

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

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

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

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

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

X. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

Seed Mixture 1 for Loamy Sites

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

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

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

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

*Pounds of pure live seed:

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