ATS-16-692

OCD Artesia

Form 3160-3
(June 2015)

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 19 2016
RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

UNORTHODOX LOCATION

1a. Type of work: ☑ DRILL ☐ REENTER	5. Lease Serial No. NMNM118108
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other	6. If Indian, Allotee or Tribe Name
1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone	7. If Unit or CA Agreement, Name and No.
2. Name of Operator: CHEVRON USA INC	8. Lease Name and Well No.: HH SO 8 P2 14H
3a. Address: 1616 W. BENDER BLVD HOBBS, NM 88240	3b. Phone No. *(include area code)*: 575-263-0431
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface: 330' FNL & 960' FWL At proposed prod. zone: 180' FNL & 996' FWL	9. API Well No.: 30-015-43931 10. Field and Pool, or Exploratory: ~~WILDCAT~~; WOLFCAMP 96890 11. Sec., T. R. M. or Blk. and Survey or Area: SEC17, T26S, R27E, UL D (SHL)
14. Distance in miles and direction from nearest town or post office*: 12.8 MILES FROM MALAGA, NEW MEXICO SW pcm 3-10-16	12. County or Parish: EDDY; 13. State: NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 330' FNL	16. No of acres in lease: 1920 ACRES; 17. Spacing Unit dedicated to this well: 320 ACRES
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 4300 FT SKEEN 2 SW	19. Proposed Depth: TD 9904' MD 20,551'; 20. BLM/BIA Bond No. in file: CA 0329
21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3247' GL	22. Approximate date work will start*: OCTOBER 2016; 23. Estimated duration: 30 DAYS

24. Attachments

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

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

25. Signature: Cindy Herrera-Murillo	Name *(Printed/Typed)*: CINDY HERRERA-MURILLO	Date: 02/11/2016
Title: PERMITTING SPECIALIST		
Approved by *(Signature)*: /s/George MacDonell	Name *(Printed/Typed)*	Date: OCT 11 2016
Title: FIELD MANAGER	Office: CARLSBAD FIELD OFFICE	

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

APPROVAL FOR TWO YEARS

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

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

(Continued on page 2)

*(Instructions on page 2)

CERTIFICATION

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

Executed this 19th day of JANUARY, 2016

Name: _____

Sean Cheben-Project Manager

Address: 1400 Smith Street

Houston, TX 77002

Room 40125

Office: 713-372-9382

Email: Sean.Cheben@CHEVRON.COM

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	[2] Pool Code	[3] Pool Name
30-015-43931	96898	~~Wildcat: Wolfcamp~~, Sage Draw; East

[4] Property Code	[5] Property Name	[6] Well Number
317043	HH SO 8 P2	14H

[7] OGRID No.	[8] Operator Name	[9] Elevation
4323	CHEVRON U.S.A. INC.	3247'

[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
D	17	26 SOUTH	27 EAST, N.M.P.M.		330'	NORTH	960'	WEST	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
D	5	26 SOUTH	27 EAST, N.M.P.M.		180'	NORTH	996'	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320			

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.

[16]

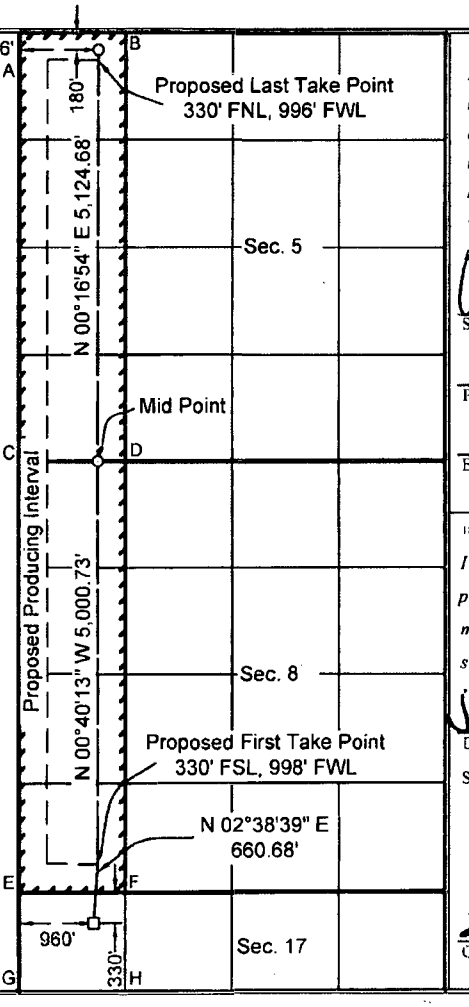
PROPOSED BOTTOM HOLE LOCATION		
X=	535,950	NAD 27
Y=	392,264	
LAT.	32.078396	
LONG.	104.217265	
X=	577,133	NAD83
Y=	392,321	
LAT.	32.078517	
LONG.	104.217760	

CORNER COORDINATES TABLE (NAD 27)

A - Y=392442.33, X=534954.83
B - Y=392444.24, X=536280.85
C - Y=387143.09, X=534935.36
D - Y=387137.83, X=536254.75
E - Y=381810.94, X=534988.20
F - Y=381808.02, X=536317.14
G - Y=380478.27, X=535007.69
H - Y=380475.74, X=536334.89

Mid Point
Y=387139.14, X=535924.76

HH SO 8 P2 14H WELL		
X=	535,953	NAD 27
Y=	381,479	
LAT.	32.048747	
LONG.	104.217293	
X=	577,136	NAD83
Y=	381,536	
LAT.	32.048869	
LONG.	104.217787	
ELEVATION +3247' NAVD 88		



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Cindy Herrera-Murillo 2-4-16
Signature Date

Cindy Herrera-Murillo
Printed Name

Cherreramurillo @chevron.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

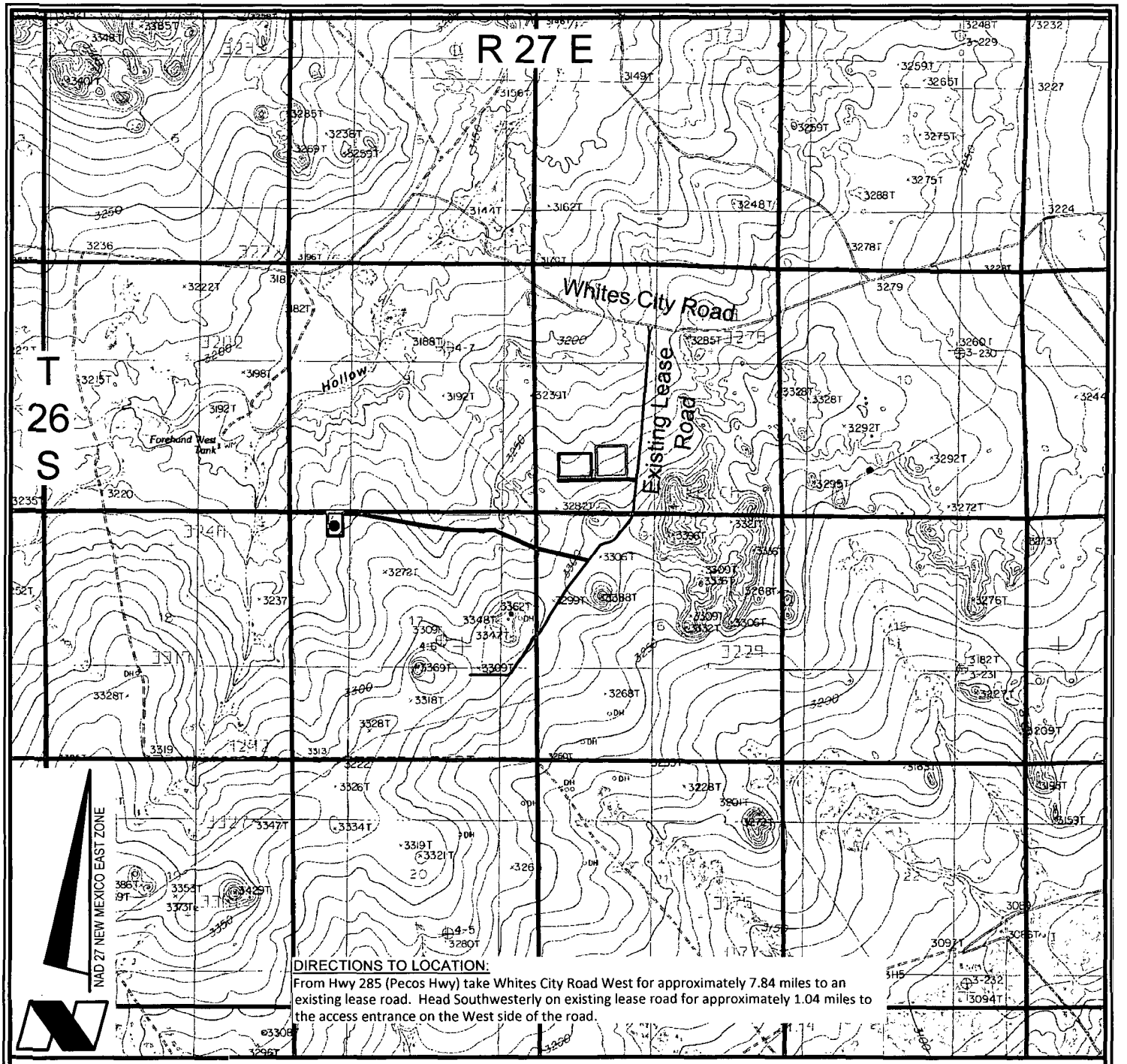
JAN 5, 2016
Date of Survey

ROBERT L. LAPES
NEW MEXICO
2-8-2016
23006
PROFESSIONAL SURVEYOR

Signature and Seal of Professional Surveyor

23006
Certificate Number

EXHIBIT 1



DIRECTIONS TO LOCATION:
From Hwy 285 (Pecos Hwy) take Whites City Road West for approximately 7.84 miles to an existing lease road. Head Southwesterly on existing lease road for approximately 1.04 miles to the access entrance on the West side of the road.

VICINITY MAP

SCALE: 1" = 3000'

3000' 0 1500' 3000'

LEGEND

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

CHEVRON U.S.A. INC.

HH SO 8 P2 NO. 14H WELL
LOCATED 330' FNL AND 960' FWL
SECTION 17, T26S-R27E
EDDY COUNTY, NEW MEXICO

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

DRAWN BY: MBD	REVISIONS			
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:	
DATE: 01/07/2016	No.	DATE:	REVISED BY:	
FILENAME: T:\2015\2153441\DWG\HH SO 8 P2 14H_APD.dwg				

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

ROBERT L. LASTRAPES
NEW MEXICO
23006
PROFESSIONAL SURVEYOR
1-19-2016

Robert L. Lastrapes
Registration No. 23006

R 27 E

T 26 S

Sec. 8

Bureau of Land Management

NW PAD CORNER		NE PAD CORNER		HH SO 8 P2 NO. 14H WELL	
X=	535,799 NAD 27	X=	536,129 NAD 27	X=	535,953 NAD 27
Y=	381,809	Y=	381,808	Y=	381,479
ELEVATION +3241' NAVD 88		ELEVATION +3247' NAVD 88		LAT.	32.048747
SW PAD CORNER		SE PAD CORNER		LONG.	104.217293
X=	535,805 NAD 27	X=	536,135 NAD 27	X=	577,136 NAD83
Y=	381,284	Y=	381,284	Y=	381,536
ELEVATION +3244' NAVD 88		ELEVATION +3256' NAVD 88		LAT.	32.048869
				LONG.	104.217787
				ELEVATION +3247' NAVD 88	

S 89°52'10" E 810.78'

Fnd. 2" Iron Pipe w/ Cap at the NW Corner of Section 17

330'
25'(Typ.)
52'
525'
150'
180'
195'
330'

HH SO 8 P2
No. 14H Well
330' FNL, 960' FWL

PROPOSED PAD
±3.98 Acres

CENTERLINE PROPOSED ACCESS ROAD (1)
24' X ±5,444.40'
±3.00 Acres
±329.96 Rods
(SEE PAGE 2)

Sec. 17

Bureau of Land Management

(Access Road 1) ± 4289.90', ±2.36 Acres, ±259.99 Rods

NAD 27 NEW MEXICO EAST ZONE

Scale: 1" = 300'

300' 0 150' 300'

FENSTERMAKER

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

SURFACE USE PLAT

CHEVRON U.S.A. INC.

PROPOSED PADS, FRAC POND & ACCESS ROADS
HH SO 8 P2 NO. 14H WELL
SECTIONS 9, 16 & 17, T26S-R27E
EDDY COUNTY, NEW MEXICO

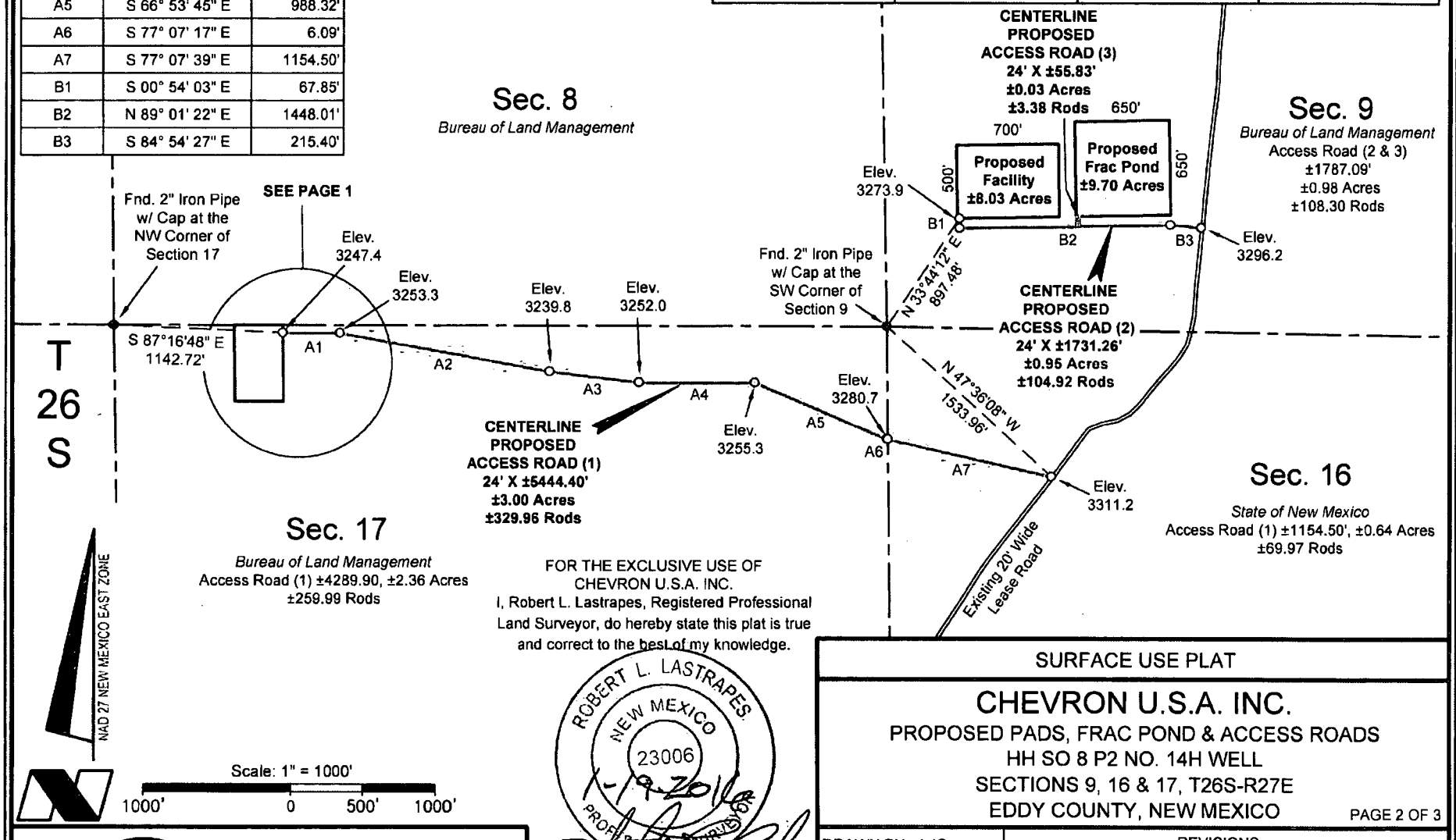
DRAWN BY: LJG	REVISIONS		
PROJ. MGR.: GDG	No. 1	DATE: 1/7/2016	REVISED BY: MBD
DATE: 12/22/2015	No. 2	DATE: 1/19/2016	REVISED BY: GDG
FILENAME: T:\2015\2153441\DWG\HH SO 8 P2 14H_SUP.dwg			

EXHIBITS 2&5

Centerline Proposed Access Roads		
COURSE	BEARING	DISTANCE
A1	S 89° 49' 39" E	398.61'
A2	S 79° 37' 12" E	1478.11'
A3	S 82° 59' 20" E	620.58'
A4	S 89° 50' 47" E	798.19'
A5	S 66° 53' 45" E	988.32'
A6	S 77° 07' 17" E	6.09'
A7	S 77° 07' 39" E	1154.50'
B1	S 00° 54' 03" E	67.85'
B2	N 89° 01' 22" E	1448.01'
B3	S 84° 54' 27" E	215.40'

R 27 E

NW FRAC POND CORNER	NE FRAC POND CORNER	NW FACILITY CORNER	NE FACILITY CORNER
X= 541,594 NAD 27 Y= 383,209	X= 542,244 NAD 27 Y= 383,220	X= 540,782 NAD 27 Y= 383,045	X= 541,482 NAD 27 Y= 383,057
ELEVATION +3264' NAVD 88	ELEVATION +3270' NAVD 88	ELEVATION +3263' NAVD 88	ELEVATION +3265' NAVD 88
SW FRAC POND CORNER	SE FRAC POND CORNER	SW FACILITY CORNER	SE FACILITY CORNER
X= 541,605 NAD 27 Y= 382,559	X= 542,255 NAD 27 Y= 382,570	X= 540,790 NAD 27 Y= 382,545	X= 541,490 NAD 27 Y= 382,557
ELEVATION +3278' NAVD 88	ELEVATION +3289' NAVD 88	ELEVATION +3274' NAVD 88	ELEVATION +3276' NAVD 88



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

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

ROBERT L. LASTRAPES NEW MEXICO 23006 1-19-2016 PROFESSIONAL SURVEYOR

Robert L. Lastrapes
Registration No. 23006

FENSTERMAKER

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SURFACE USE PLAT

CHEVRON U.S.A. INC.

PROPOSED PADS, FRAC POND & ACCESS ROADS
HH SO 8 P2 NO. 14H WELL
SECTIONS 9, 16 & 17, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: LJG	REVISIONS		
PROJ. MGR.: GDG	No. 1	DATE: 1/7/2016	REVISED BY: MBD
DATE: 12/22/2015	No. 2	DATE: 1/19/2016	REVISED BY: GDG
FILENAME: T:\2015\2153441\DWG\HH SO 8 P2 14H_SUP.dwg			

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

NOTE:
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

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

ROBERT L. LASTRAPES
NEW MEXICO
23006
1-19-2016
PROFESSIONAL SURVEYOR

Robert L. Lastrapes
Registration No. 23006

FENSTERMAKER

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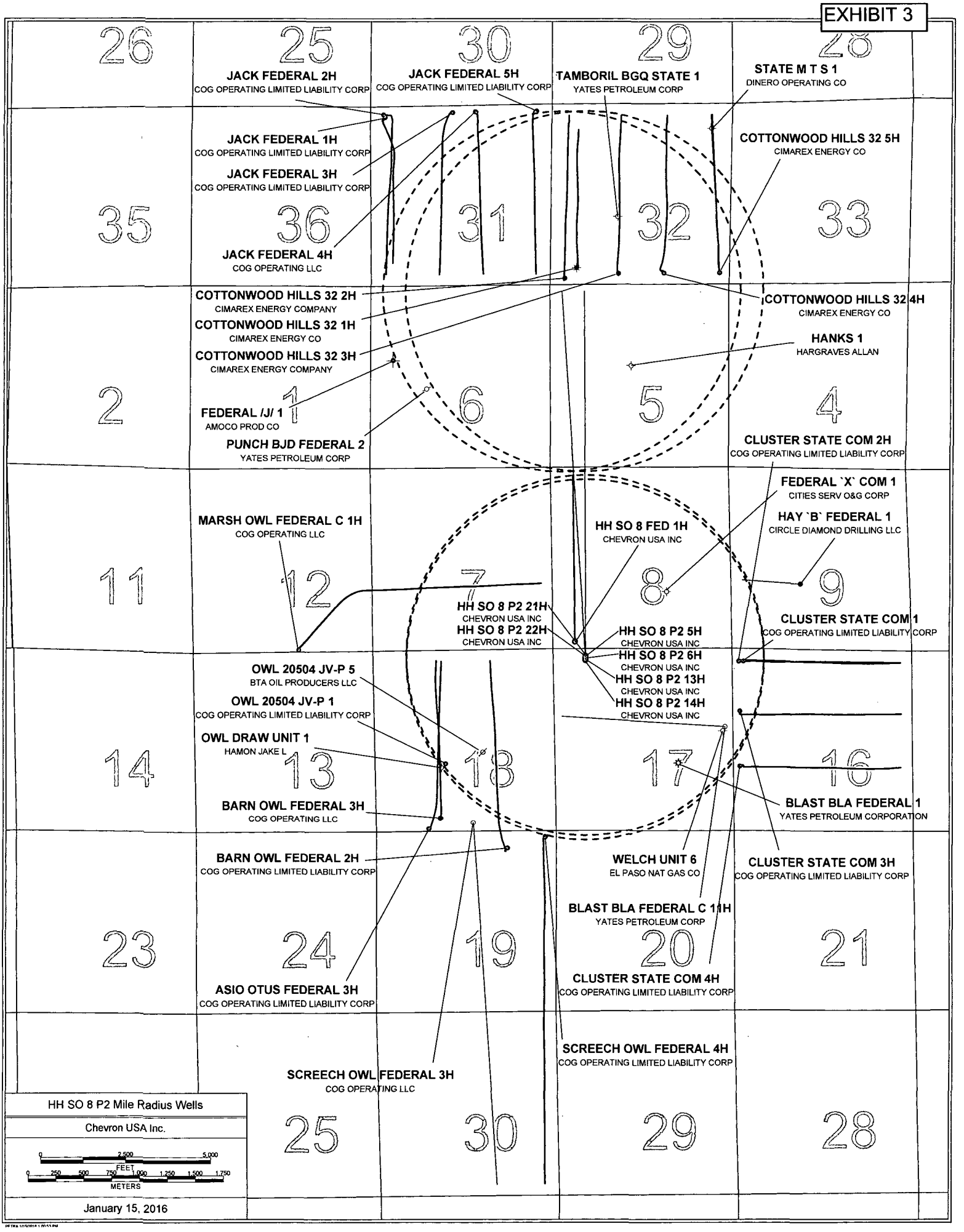
SURFACE USE PLAT

CHEVRON U.S.A. INC.

PROPOSED PADS, FRAC POND & ACCESS ROADS
HH SO 8 P2 NO. 14H WELL
SECTIONS 9, 16 & 17, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: LJG	REVISIONS		
PROJ. MGR.: GDG	No. 1	DATE: 1/7/2016	REVISED BY: MBD
DATE: 12/22/2015	No. 2	DATE: 1/19/2016	REVISED BY: GDG
FILENAME: T:\2015\2153441\DWG\HH SO 8 P2 14H_SUP.dwg			

EXHIBIT 3


26
25
JACK FEDERAL 2H
COG OPERATING LIMITED LIABILITY CORP
30
JACK FEDERAL 5H
COG OPERATING LIMITED LIABILITY CORP
29
TAMBORIL BGQ STATE 1
YATES PETROLEUM CORP
28
STATE M T S 1
DINERO OPERATING CO
JACK FEDERAL 1H
COG OPERATING LIMITED LIABILITY CORP
JACK FEDERAL 3H
COG OPERATING LIMITED LIABILITY CORP
COTTONWOOD HILLS 32 5H
CIMAREX ENERGY CO
35
36
JACK FEDERAL 4H
COG OPERATING LLC
31
32
33
COTTONWOOD HILLS 32 2H
CIMAREX ENERGY COMPANY
COTTONWOOD HILLS 32 1H
CIMAREX ENERGY CO
COTTONWOOD HILLS 32 3H
CIMAREX ENERGY COMPANY
COTTONWOOD HILLS 32 4H
CIMAREX ENERGY CO
HANKS 1
HARGRAVES ALLAN
2
1
FEDERAL /J/ 1
AMOCO PROD CO
6
5
4
PUNCH BJD FEDERAL 2
YATES PETROLEUM CORP
CLUSTER STATE COM 2H
COG OPERATING LIMITED LIABILITY CORP
FEDERAL `X` COM 1
CITIES SERV O&G CORP
MARSH OWL FEDERAL C 1H
COG OPERATING LLC
HH SO 8 FED 1H
CHEVRON USA INC
HAY `B` FEDERAL 1
CIRCLE DIAMOND DRILLING LLC
11
12
7
8
9
HH SO 8 P2 21H
CHEVRON USA INC
HH SO 8 P2 22H
CHEVRON USA INC
HH SO 8 P2 5H
CHEVRON USA INC
HH SO 8 P2 6H
CHEVRON USA INC
HH SO 8 P2 13H
CHEVRON USA INC
HH SO 8 P2 14H
CHEVRON USA INC
CLUSTER STATE COM 1
COG OPERATING LIMITED LIABILITY CORP
OWL 20504 JV-P 5
BTA OIL PRODUCERS LLC
OWL 20504 JV-P 1
COG OPERATING LIMITED LIABILITY CORP
OWL DRAW UNIT 1
HAMON JAKE L
14
13
18
17
16
BARN OWL FEDERAL 3H
COG OPERATING LLC
BLAST BLA FEDERAL 1
YATES PETROLEUM CORPORATION
BARN OWL FEDERAL 2H
COG OPERATING LIMITED LIABILITY CORP
WELCH UNIT 6
EL PASO NAT GAS CO
CLUSTER STATE COM 3H
COG OPERATING LIMITED LIABILITY CORP
BLAST BLA FEDERAL C 1H
YATES PETROLEUM CORP
23
24
19
20
21
ASIO OTUS FEDERAL 3H
COG OPERATING LIMITED LIABILITY CORP
CLUSTER STATE COM 4H
COG OPERATING LIMITED LIABILITY CORP
SCREECH OWL FEDERAL 4H
COG OPERATING LIMITED LIABILITY CORP
SCREECH OWL FEDERAL 3H
COG OPERATING LLC
25
30
29
28
HH SO 8 P2 Mile Radius Wells
Chevron USA Inc.
0 2,500 5,000
FEET
0 250 500 750 1,000 1,250 1,500 1,750
METERS
January 15, 2016

1. **FORMATION TOPS**

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA TVD	KBTVD	MD
Castille		505	
Lamar		2395	
Bell		2310	
Cherry		3208	
Brushy		4450	
Bone Spring/Avalon		6299	
First Bone Spring Sand		6888	
First Bone Spring Shale		6914	
Second Bone Spring Sand		7621	
Harkey Sand		8123	
Third Bone Spring Sand		8617	
Wolfcamp A		9342	
Wolfcamp D		10000	
Lateral TVD Wolfcamp D		10000	20613.13'

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

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

Substance	Formation	Depth
Deepest Expected Base of Fresh Water		450
Water	Castille	505
Water	Cherry Canyon	3208
Oil/Gas	Brushy Canyon	4450
Oil/Gas	Bone Spring Limestone	6888
Oil/Gas	First Bone Spring Shale	6914
Oil/Gas	Second Bone Spring Sand	7621
Oil/Gas	Harkey Sand	8123
Oil/Gas	Wolfcamp A	9342
Oil/Gas	Wolfcamp D	10000

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

3. **BOP EQUIPMENT**

PLEASE REFERENCE MDP

10 M BOP after surface casing

Batch Drilling

4. **CASING PROGRAM**

Purpose	From	To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	450'	17-1/2"	13-3/8"	54.5 #	K-55	STC	New
Intermediate	0'	9,015'	12-1/4"	9-5/8"	40.0 #	L-80	TXP	New
Production	0'	20,613'	8-1/2"	0"	20.0 #	P-110	TXP	New

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

Surface Casing: 450'
Intermediate Casing: 9015'
Production Casing: 20613.13' MD/10,000' TVD (10,000' VS @ 89.7 deg inc)

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension	Min SF Tri-Axial
Surface	1.82	5.11	3.97	2.31
Intermediate	1.45	1.32	1.78	1.84
Production	1.26	1.5	2.43	1.35

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	Cement Top	Cement Bottom	Weight	Yield	%Excess	Sacks	Water
Surface				(ppg)	(sx/cu ft)	Open Hole		gal/sk
Tail	Class C	0'	450'	14.8	1.33	50	356	6.37
Intermediate								
Stage 2 Lead	50:50 Poz: Class C + Antifoam, Extender, Salt, Retarder	0'	1,100'	11.9	2.43	50	213	14.21
Stage 2 Tail	Class C + Antifoam, Retarder, Viscosifier	1,100'	2,100'	14.8	1.33	0	235	6.37
DV TOOL		2,100'						
Stage 1 Lead	50:50 Poz: Class H + Extender, Antifoam, Retarder, Salt, Viscosifier	2,100'	8,015'	11.9	2.43	100	1524	13.76
Stage 1 Tail	Class H + Retarder, Extender, Dispersant	8,015'	9,015'	15.6	1.21	50	389	5.54
Production								
Lead	50:50 Poz: Class H + Extender, Antifoam, Dispersant, , Retarder	7,015'	8,015'	14.5	1.21	100	430	5.54
Tail	Class H + Viscosifier, Antifoam, Dispersant, Fluid Loss, Retarder, Expanding Agent	8,015'	20,613'	15.6	1.2	50	3605	5.30
Pilot Hole								
Tail	Class C	9,500'	~~10,000'~~ 10,207	17.2	0.97	~~50~~-100	50-100	3.61

350 sacks -per R. Milligan 7-26-16

6. **MUD PROGRAM**

8.3-8.7 32-34 NC-NC

From	To	Type	Weight	F. Vis	Filtrate
0'	450'	Spud Mud	~~0~~	~~0~~	~~0~~
450'	9015'	OBM	9.0 - 9.5	50 -70	5.0 - 10
9015'	20,613'	OBM	10.0 - 13.5	50 -70	5.0 - 10

7. **TESTING, LOGGING, AND CORING**

TYPE	Logs	Interval	Timing	Vendor
Mudlogs	2 man mudlog	Int Csg to TD	Drillout of Int Csg	TBD
LWD	MWD Gamma	Int. and Prod. Hole	While Drilling	TBD
Wireline Logs	Quad Combo w/ Di-Pole Sonic, FMI,	Prod hole	After Intermediate hole	TBD

8. **ABNORMAL PRESSURES AND HYDROGEN SULFIDE**

PLEASE REFERENCE MDP

Schlumberger

#14H - Rev0

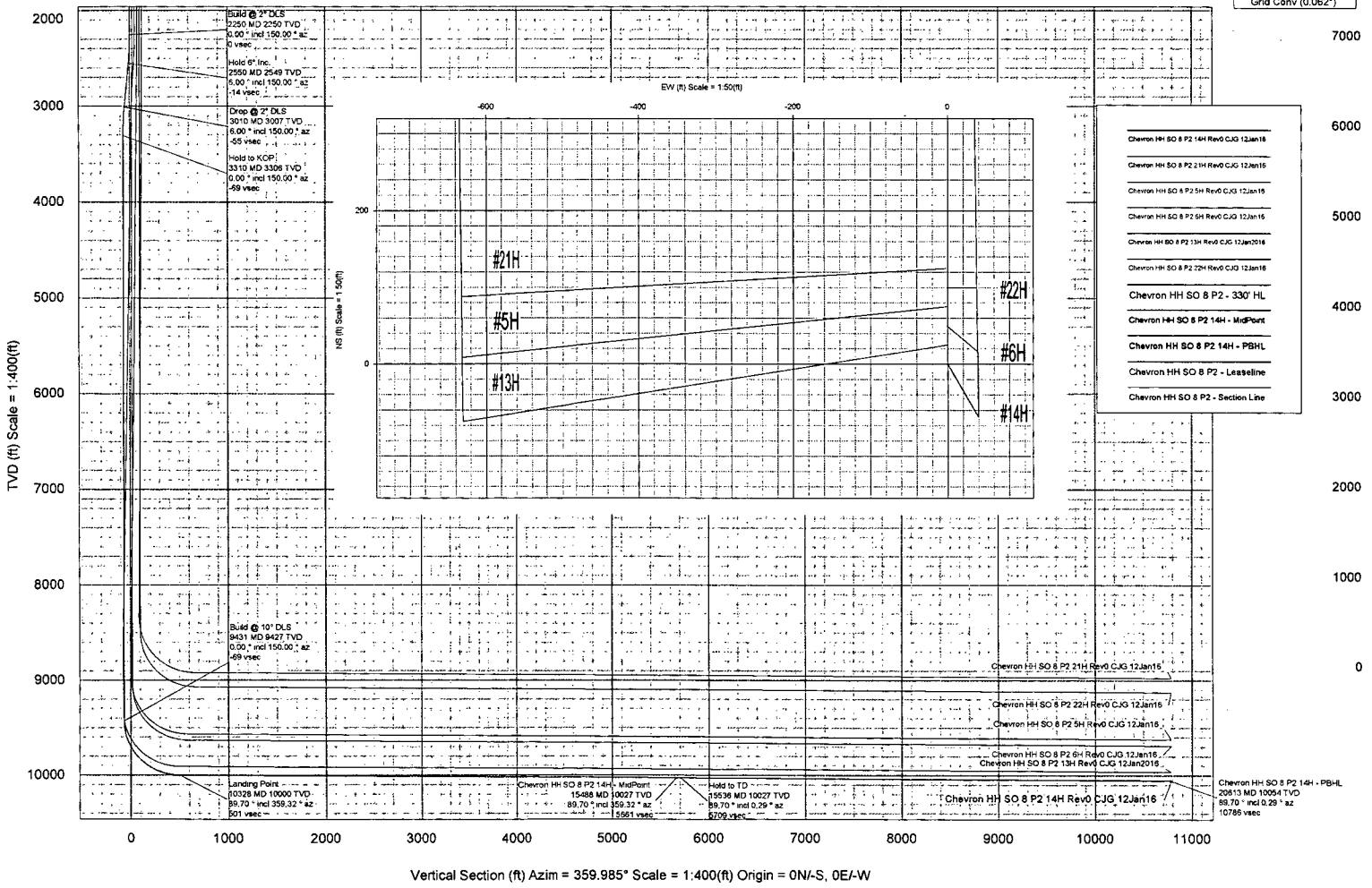
Chevron

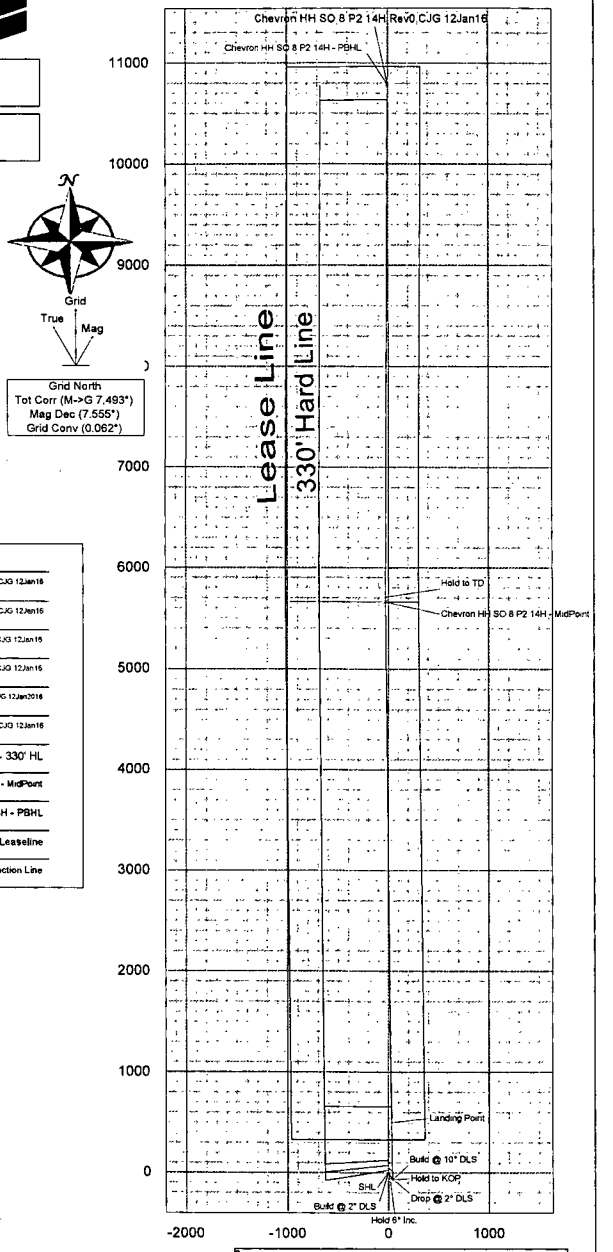
Borehole:	Well:	Field:	Structure:
Original Borehole	HH SO 8 P2 14H	NM Eddy County (NAD 27)	TBD

Gravity & Magnetic Parameters				Surface Location	NAD27 New Mexico State Plane, Eastern Zone, US Feet				Miscellaneous			
Model:	HDGM 2015	Dip: 59.774°	Date: 08-Jan-2016	Lat:	N 32 2 55.49	Northing:	381479ftUS	Grid Conv: 0.0616°	Slot:	HH SO 8 P2 14H	TVD Ref:	RKB(3280ft above MSL)
MagDec:	7.555°	FS: 48138.973nT	Gravity FS: 998.43mgn (9.80665 Based)	Lon:	W 104 13 2.26	Easting:	535963ftUS	Scale Fact: 0.99991067	Plan:	Rev0 CJG 12Jan16		

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL	0.00	0.00	150.00	0.00	0.00	0.00	0.00	
Build @ 2° DLS	2250.00	0.00	150.00	2250.00	0.00	0.00	0.00	0.00
Hold 6° Inc.	2550.00	6.00	150.00	2549.45	-13.59	-13.59	7.85	2.00
Drop @ 2° DLS	3010.00	6.00	150.00	3006.93	-55.24	-55.23	31.89	0.00
Hold to KOP	3310.00	0.00	150.00	3306.38	-68.83	-68.82	39.74	2.00
Build @ 10° DLS	9430.67	0.00	150.00	9427.05	-68.83	-68.82	39.74	0.00
Landing Point	10327.67	89.70	359.32	10000.00	501.09	501.10	32.97	10.00
Chevron HH SO 8 P2 14H - MidPoint	15487.66	89.70	359.32	10027.01	5660.66	5660.66	-28.24	0.00
Hold to TD	15535.90	89.70	0.28	10027.26	5708.90	5708.89	-28.41	2.00
Chevron HH SO 8 P2 14H - PBHL	20613.13	89.70	0.29	10053.85	10785.99	10785.99	-3.00	0.00





CONTROLLED

Plan ref	Chevron HH SO 8 P2 14H Rev0 CJG 12Jan16	
Drawing ref		
Copy number	of 3	
Date	12-Jan-2016	
1	Originator	Colby Gannon
2	DEC Sign Off	
3	CC Sign Off	
4	Client	Chevron

Copy number for

Schlumberger

Chevron

Chevron HH SO 8 P2 14H Rev0 CJG 12Jan16 Proposal Geodetic Report

(Non-Def Plan)

Report Date:	January 12, 2016 - 02:36 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Chevron	**Vertical Section Azimuth:**	359.985 ° (Grid North)
Field:	NM Eddy County (NAD 27)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Chevron HH SO 8 P2 Pad / Chevron HH SO 8 P2 14H	**TVD Reference Datum:**	RKB
Well:	HH SO 8 P2 14H	**TVD Reference Elevation:**	3280.000 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3247.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	7.555 °
Survey Name:	Chevron HH SO 8 P2 14H Rev0 CJG 12Jan16	**Total Gravity Field Strength:**	998.4304mgn (9.80665 Based)
Survey Date:	January 08, 2016	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	102.668 ° / 10934.747 ft / 6.362 / 1.088	**Total Magnetic Field Strength:**	48138.973 nT
Coordinate Reference System:	NAD27 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.774 °
Location Lat / Long:	N 32° 2' 55.49131", W 104° 13' 2.25309"	**Declination Date:**	January 08, 2016
Location Grid N/E Y/X:	N 381479.000 ftUS, E 535953.000 ftUS	**Magnetic Declination Model:**	HDGM 2015
CRS Grid Convergence Angle:	0.0616 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99991057	**Grid Convergence Used:**	0.0616 °
Version / Patch:	2.8.572.0	**Total Corr Mag North->Grid North:**	7.4938 °
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	150.00	0.00	0.00	0.00	0.00	N/A	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	100.00	0.00	150.00	100.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	200.00	0.00	150.00	200.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	300.00	0.00	150.00	300.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	400.00	0.00	150.00	400.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	500.00	0.00	150.00	500.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	600.00	0.00	150.00	600.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	700.00	0.00	150.00	700.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	800.00	0.00	150.00	800.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	900.00	0.00	150.00	900.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	1000.00	0.00	150.00	1000.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	1100.00	0.00	150.00	1100.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	1200.00	0.00	150.00	1200.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	1300.00	0.00	150.00	1300.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	1400.00	0.00	150.00	1400.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	1500.00	0.00	150.00	1500.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	1600.00	0.00	150.00	1600.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	1700.00	0.00	150.00	1700.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	1800.00	0.00	150.00	1800.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	1900.00	0.00	150.00	1900.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	2000.00	0.00	150.00	2000.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	2100.00	0.00	150.00	2100.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	2200.00	0.00	150.00	2200.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
Build @ 2° DLS	2250.00	0.00	150.00	2250.00	0.00	0.00	0.00	0.00	381479.00	535953.00	N 32 2 55.49	W 104 13 2.25
	2300.00	1.00	150.00	2300.00	-0.38	-0.38	0.22	2.00	381478.62	535953.22	N 32 2 55.49	W 104 13 2.25
	2400.00	3.00	150.00	2399.93	-3.40	-3.40	1.96	2.00	381475.60	535954.96	N 32 2 55.46	W 104 13 2.23
	2500.00	5.00	150.00	2499.68	-9.44	-9.44	5.45	2.00	381469.56	535958.45	N 32 2 55.40	W 104 13 2.19
Hold 6° Inc.	2550.00	6.00	150.00	2549.45	-13.59	-13.59	7.85	2.00	381465.41	535960.85	N 32 2 55.36	W 104 13 2.16
	2600.00	6.00	150.00	2599.18	-18.12	-18.12	10.46	0.00	381460.88	535963.46	N 32 2 55.31	W 104 13 2.13
	2700.00	6.00	150.00	2698.63	-27.17	-27.17	15.69	0.00	381451.83	535968.69	N 32 2 55.22	W 104 13 2.07
	2800.00	6.00	150.00	2798.08	-36.23	-36.22	20.91	0.00	381442.78	535973.91	N 32 2 55.13	W 104 13 2.01
	2900.00	6.00	150.00	2897.53	-45.28	-45.27	26.14	0.00	381433.73	535979.14	N 32 2 55.04	W 104 13 1.95
	3000.00	6.00	150.00	2996.99	-54.33	-54.33	31.37	0.00	381424.68	535984.36	N 32 2 54.95	W 104 13 1.89
Drop @ 2° DLS	3010.00	6.00	150.00	3006.93	-55.24	-55.23	31.89	0.00	381423.77	535984.89	N 32 2 54.94	W 104 13 1.88
	3100.00	4.20	150.00	3096.57	-62.17	-62.16	35.89	2.00	381416.85	535988.89	N 32 2 54.88	W 104 13 1.84
	3200.00	2.20	150.00	3196.41	-67.00	-66.99	38.68	2.00	381412.01	535991.68	N 32 2 54.83	W 104 13 1.80
	3300.00	0.20	150.00	3296.38	-68.82	-68.81	39.73	2.00	381410.20	535992.72	N 32 2 54.81	W 104 13 1.79
Hold to KOP	3310.00	0.00	150.00	3306.38	-68.83	-68.82	39.74	2.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	3400.00	0.00	150.00	3396.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	3500.00	0.00	150.00	3496.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	3600.00	0.00	150.00	3596.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	3700.00	0.00	150.00	3696.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	3800.00	0.00	150.00	3796.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	3900.00	0.00	150.00	3896.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	4000.00	0.00	150.00	3996.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	4100.00	0.00	150.00	4096.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	4200.00	0.00	150.00	4196.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	4300.00	0.00	150.00	4296.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	4400.00	0.00	150.00	4396.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	4500.00	0.00	150.00	4496.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	4600.00	0.00	150.00	4596.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	4700.00	0.00	150.00	4696.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	4800.00	0.00	150.00	4796.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	4900.00	0.00	150.00	4896.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	5000.00	0.00	150.00	4996.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	5100.00	0.00	150.00	5096.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	5200.00	0.00	150.00	5196.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	5300.00	0.00	150.00	5296.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	5400.00	0.00	150.00	5396.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	5500.00	0.00	150.00	5496.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	5600.00	0.00	150.00	5596.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	5700.00	0.00	150.00	5696.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	5800.00	0.00	150.00	5796.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	5900.00	0.00	150.00	5896.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	6000.00	0.00	150.00	5996.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	6100.00	0.00	150.00	6096.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	6200.00	0.00	150.00	6196.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	6300.00	0.00	150.00	6296.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	6400.00	0.00	150.00	6396.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	6500.00	0.00	150.00	6496.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	6600.00	0.00	150.00	6596.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	6700.00	0.00	150.00	6696.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	6800.00	0.00	150.00	6796.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	6900.00	0.00	150.00	6896.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	7000.00	0.00	150.00	6996.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	7100.00	0.00	150.00	7096.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	7200.00	0.00	150.00	7196.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	7300.00	0.00	150.00	7296.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	7400.00	0.00	150.00	7396.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	7500.00	0.00	150.00	7496.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	7600.00	0.00	150.00	7596.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	7700.00	0.00	150.00	7696.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	7800.00	0.00	150.00	7796.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	7900.00	0.00	150.00	7896.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	8000.00	0.00	150.00	7996.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	8100.00	0.00	150.00	8096.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	8200.00	0.00	150.00	8196.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	8300.00	0.00	150.00	8296.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	8400.00	0.00	150.00	8396.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	8500.00	0.00	150.00	8496.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	8600.00	0.00	150.00	8596.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	8700.00	0.00	150.00	8696.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	8800.00	0.00	150.00	8796.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	8900.00	0.00	150.00	8896.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	9000.00	0.00	150.00	8996.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	9100.00	0.00	150.00	9096.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	9200.00	0.00	150.00	9196.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	9300.00	0.00	150.00	9296.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	9400.00	0.00	150.00	9396.38	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
Build @ 10° DLS	9430.67	0.00	150.00	9427.05	-68.83	-68.82	39.74	0.00	381410.18	535992.73	N 32 2 54.81	W 104 13 1.79
	9500.00	6.93	359.32	9496.21	-64.64	-64.63	39.69	10.00	381414.37	535992.68	N 32 2 54.85	W 104 13 1.79
	9600.00	16.93	359.32	9593.93	-43.99	-43.98	39.44	10.00	381435.02	535992.44	N 32 2 55.06	W 104 13 1.80
	9700.00	26.93	359.32	9686.57	-6.69	-6.68	39.00	10.00	381472.32	535991.99	N 32 2 55.42	W 104 13 1.80
	9800.00	36.93	359.32	9771.33	46.13	46.14	38.37	10.00	381525.14	535991.37	N 32 2 55.95	W 104 13 1.81
	9900.00	46.93	359.32	9845.63	112.87	112.88	37.58	10.00	381591.87	535990.58	N 32 2 56.61	W 104 13 1.82
	10000.00	56.93	359.32	9907.21	191.49	191.50	36.65	10.00	381670.49	535989.64	N 32 2 57.39	W 104 13 1.82
	10100.00	66.93	359.32	9954.20	279.62	279.62	35.60	10.00	381758.60	535988.60	N 32 2 58.26	W 104 13 1.84
	10200.00	76.93	359.32	9985.17	374.56	374.57	34.47	10.00	381853.53	535987.47	N 32 2 59.20	W 104 13 1.85
	10300.00	86.93	359.32	9999.19	473.44	473.45	33.30	10.00	381952.40	535986.30	N 32 3 0.18	W 104 13 1.86
Landing Point	10327.67	89.70	359.32	10000.00	501.09	501.10	32.97	10.00	381980.05	535985.97	N 32 3 0.45	W 104 13 1.86
	10400.00	89.70	359.32	10000.38	573.41	573.42	32.12	0.00	382052.37	535985.11	N 32 3 1.17	W 104 13 1.87
	10500.00	89.70	359.32	10000.90	673.41	673.41	30.93	0.00	382152.35	535983.93	N 32 3 2.15	W 104 13 1.89
	10600.00	89.70	359.32	10001.43	773.40	773.41	29.74	0.00	382252.33	535982.74	N 32 3 3.14	W 104 13 1.90
	10700.00	89.70	359.32	10001.95	873.39	873.40	28.56	0.00	382352.32	535981.55	N 32 3 4.13	W 104 13 1.91
	10800.00	89.70	359.32	10002.47	973.38	973.39	27.37	0.00	382452.30	535980.37	N 32 3 5.12	W 104 13 1.92
	10900.00	89.70	359.32	10003.00	1073.37	1073.38	26.18	0.00	382552.28	535979.18	N 32 3 6.11	W 104 13 1.94
	11000.00	89.70	359.32	10003.52	1173.37	1173.37	25.00	0.00	382652.26	535977.99	N 32 3 7.10	W 104 13 1.95
	11100.00	89.70	359.32	10004.04	1273.36	1273.36	23.81	0.00	382752.25	535976.81	N 32 3 8.09	W 104 13 1.96
	11200.00	89.70	359.32	10004.57	1373.35	1373.36	22.62	0.00	382852.23	535975.62	N 32 3 9.08	W 104 13 1.97
	11300.00	89.70	359.32	10005.09	1473.34	1473.35	21.44	0.00	382952.21	535974.44	N 32 3 10.07	W 104 13 1.99
	11400.00	89.70	359.32	10005.61	1573.33	1573.34	20.25	0.00	383052.19	535973.25	N 32 3 11.06	W 104 13 2.00
	11500.00	89.70	359.32	10006.14	1673.32	1673.33	19.07	0.00	383152.18	535972.06	N 32 3 12.05	W 104 13 2.01
	11600.00	89.70	359.32	10006.66	1773.32	1773.32	17.88	0.00	383252.16	535970.88	N 32 3 13.04	W 104 13 2.02
	11700.00	89.70	359.32	10007.18	1873.31	1873.31	16.69	0.00	383352.14	535969.69	N 32 3 14.03	W 104 13 2.04
	11800.00	89.70	359.32	10007.71	1973.30	1973.30	15.51	0.00	383452.12	535968.50	N 32 3 15.02	W 104 13 2.05
	11900.00	89.70	359.32	10008.23	2073.29	2073.30	14.32	0.00	383552.11	535967.32	N 32 3 16.01	W 104 13 2.06
	12000.00	89.70	359.32	10008.75	2173.28	2173.29	13.13	0.00	383652.09	535966.13	N 32 3 17.00	W 104 13 2.07
	12100.00	89.70	359.32	10009.28	2273.28	2273.28	11.95	0.00	383752.07	535964.95	N 32 3 17.99	W 104 13 2.09
	12200.00	89.70	359.32	10009.80	2373.27	2373.27	10.76	0.00	383852.05	535963.76	N 32 3 18.98	W 104 13 2.10
	12300.00	89.70	359.32	10010.32	2473.26	2473.26	9.57	0.00	383952.04	535962.57	N 32 3 19.97	W 104 13 2.11
	12400.00	89.70	359.32	10010.85	2573.25	2573.25	8.39	0.00	384052.02	535961.39	N 32 3 20.96	W 104 13 2.12
	12500.00	89.70	359.32	10011.37	2673.24	2673.25	7.20	0.00	384152.00	535960.20	N 32 3 21.94	W 104 13 2.14
	12600.00	89.70	359.32	10011.89	2773.24	2773.24	6.02	0.00	384251.98	535959.01	N 32 3 22.93	W 104 13 2.15
	12700.00	89.70	359.32	10012.42	2873.23	2873.23	4.83	0.00	384351.97	535957.83	N 32 3 23.92	W 104 13 2.16
	12800.00	89.70	359.32	10012.94	2973.22	2973.22	3.64	0.00	384451.95	535956.64	N 32 3 24.91	W 104 13 2.17
	12900.00	89.70	359.32	10013.46	3073.21	3073.21	2.46	0.00	384551.93	535955.46	N 32 3 25.90	W 104 13 2.19
	13000.00	89.70	359.32	10013.99	3173.20	3173.20	1.27	0.00	384651.91	535954.27	N 32 3 26.89	W 104 13 2.20
	13100.00	89.70	359.32	10014.51	3273.20	3273.20	0.08	0.00	384751.90	535953.08	N 32 3 27.88	W 104 13 2.21
	13200.00	89.70	359.32	10015.04	3373.19	3373.19	-1.10	0.00	384851.88	535951.90	N 32 3 28.87	W 104 13 2.22
	13300.00	89.70	359.32	10015.56	3473.18	3473.18	-2.29	0.00	384951.86	535950.71	N 32 3 29.86	W 104 13 2.24
	13400.00	89.70	359.32	10016.08	3573.17	3573.17	-3.48	0.00	385051.84	535949.52	N 32 3 30.85	W 104 13 2.25
	13500.00	89.70	359.32	10016.61	3673.16	3673.16	-4.66	0.00	385151.83	535948.34	N 32 3 31.84	W 104 13 2.26
	13600.00	89.70	359.32	10017.13	3773.15	3773.15	-5.85	0.00	385251.81	535947.15	N 32 3 32.83	W 104 13 2.27
	13700.00	89.70	359.32	10017.65	3873.15	3873.14	-7.03	0.00	385351.79	535945.97	N 32 3 33.82	W 104 13 2.29
	13800.00	89.70	359.32	10018.18	3973.14	3973.14	-8.22	0.00	385451.77	535944.78	N 32 3 34.81	W 104 13 2.30
	13900.00	89.70	359.32	10018.70	4073.13	4073.13	-9.41	0.00	385551.76	535943.59	N 32 3 35.80	W 104 13 2.31
	14000.00	89.70	359.32	10019.22	4173.12	4173.12	-10.59	0.00	385651.74	535942.41	N 32 3 36.79	W 104 13 2.32
	14100.00	89.70	359.32	10019.75	4273.11	4273.11	-11.78	0.00	385751.72	535941.22	N 32 3 37.78	W 104 13 2.34
	14200.00	89.70	359.32	10020.27	4373.11	4373.10	-12.97	0.00	385851.70	535940.03	N 32 3 38.77	W 104 13 2.35
	14300.00	89.70	359.32	10020.79	4473.10	4473.09	-14.15	0.00	385951.69	535938.85	N 32 3 39.76	W 104 13 2.36
	14400.00	89.70	359.32	10021.32	4573.09	4573.09	-15.34	0.00	386051.67	535937.66	N 32 3 40.75	W 104 13 2.37
	14500.00	89.70	359.32	10021.84	4673.08	4673.08	-16.53	0.00	386151.65	535936.48	N 32 3 41.73	W 104 13 2.39
	14600.00	89.70	359.32	10022.36	4773.07	4773.07	-17.71	0.00	386251.63	535935.29	N 32 3 42.72	W 104 13 2.40

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	14700.00	89.70	359.32	10022.89	4873.07	4873.06	-18.90	0.00	386351.62	535934.10	N 32 3 43.71	W 104 13 2.41
	14800.00	89.70	359.32	10023.41	4973.06	4973.05	-20.08	0.00	386451.60	535932.92	N 32 3 44.70	W 104 13 2.42
	14900.00	89.70	359.32	10023.93	5073.05	5073.04	-21.27	0.00	386551.58	535931.73	N 32 3 45.69	W 104 13 2.44
	15000.00	89.70	359.32	10024.46	5173.04	5173.04	-22.46	0.00	386651.56	535930.54	N 32 3 46.68	W 104 13 2.45
	15100.00	89.70	359.32	10024.98	5273.03	5273.03	-23.64	0.00	386751.55	535929.36	N 32 3 47.67	W 104 13 2.46
	15200.00	89.70	359.32	10025.50	5373.02	5373.02	-24.83	0.00	386851.53	535928.17	N 32 3 48.66	W 104 13 2.47
	15300.00	89.70	359.32	10026.03	5473.02	5473.01	-26.02	0.00	386951.51	535926.99	N 32 3 49.65	W 104 13 2.49
	15400.00	89.70	359.32	10026.55	5573.01	5573.00	-27.20	0.00	387051.49	535925.80	N 32 3 50.64	W 104 13 2.50
Chevron HH SO 8 P2 14H - MidPoint	15487.66	89.70	359.32	10027.01	5660.66	5660.66	-28.24	0.00	387139.14	535924.76	N 32 3 51.51	W 104 13 2.51
	15500.00	89.70	359.57	10027.07	5673.00	5672.99	-28.36	2.00	387151.48	535924.64	N 32 3 51.63	W 104 13 2.51
Hold to TD	15535.90	89.70	0.29	10027.26	5708.90	5708.89	-28.41	2.00	387187.37	535924.59	N 32 3 51.99	W 104 13 2.51
	15600.00	89.70	0.29	10027.60	5773.00	5772.99	-28.09	0.00	387251.46	535924.91	N 32 3 52.62	W 104 13 2.51
	15700.00	89.70	0.29	10028.12	5873.00	5872.99	-27.59	0.00	387351.45	535925.41	N 32 3 53.61	W 104 13 2.50
	15800.00	89.70	0.29	10028.65	5972.99	5972.99	-27.09	0.00	387451.44	535925.91	N 32 3 54.60	W 104 13 2.49
	15900.00	89.70	0.29	10029.17	6072.99	6072.98	-26.60	0.00	387551.43	535926.41	N 32 3 55.59	W 104 13 2.49
	16000.00	89.70	0.29	10029.69	6172.99	6172.98	-26.10	0.00	387651.42	535926.90	N 32 3 56.58	W 104 13 2.48
	16100.00	89.70	0.29	10030.22	6272.98	6272.98	-25.60	0.00	387751.40	535927.40	N 32 3 57.57	W 104 13 2.47
	16200.00	89.70	0.29	10030.74	6372.98	6372.98	-25.10	0.00	387851.39	535927.90	N 32 3 58.56	W 104 13 2.47
	16300.00	89.70	0.29	10031.26	6472.98	6472.97	-24.60	0.00	387951.38	535928.40	N 32 3 59.55	W 104 13 2.46
	16400.00	89.70	0.29	10031.79	6572.98	6572.97	-24.11	0.00	388051.37	535928.90	N 32 4 0.54	W 104 13 2.45
	16500.00	89.70	0.29	10032.31	6672.97	6672.97	-23.61	0.00	388151.36	535929.39	N 32 4 1.53	W 104 13 2.44
	16600.00	89.70	0.29	10032.83	6772.97	6772.97	-23.11	0.00	388251.35	535929.89	N 32 4 2.51	W 104 13 2.44
	16700.00	89.70	0.29	10033.36	6872.97	6872.96	-22.61	0.00	388351.33	535930.39	N 32 4 3.50	W 104 13 2.43
	16800.00	89.70	0.29	10033.88	6972.97	6972.96	-22.11	0.00	388451.32	535930.89	N 32 4 4.49	W 104 13 2.42
	16900.00	89.70	0.29	10034.41	7072.96	7072.96	-21.61	0.00	388551.31	535931.39	N 32 4 5.48	W 104 13 2.42
	17000.00	89.70	0.29	10034.93	7172.96	7172.95	-21.11	0.00	388651.30	535931.89	N 32 4 6.47	W 104 13 2.41
	17100.00	89.70	0.29	10035.45	7272.96	7272.95	-20.61	0.00	388751.29	535932.39	N 32 4 7.46	W 104 13 2.40
	17200.00	89.70	0.29	10035.98	7372.95	7372.95	-20.11	0.00	388851.28	535932.89	N 32 4 8.45	W 104 13 2.39
	17300.00	89.70	0.29	10036.50	7472.95	7472.95	-19.62	0.00	388951.26	535933.39	N 32 4 9.44	W 104 13 2.39
	17400.00	89.70	0.29	10037.02	7572.95	7572.94	-19.12	0.00	389051.25	535933.89	N 32 4 10.43	W 104 13 2.38
	17500.00	89.70	0.29	10037.55	7672.95	7672.94	-18.62	0.00	389151.24	535934.39	N 32 4 11.42	W 104 13 2.37
	17600.00	89.70	0.29	10038.07	7772.94	7772.94	-18.12	0.00	389251.23	535934.89	N 32 4 12.41	W 104 13 2.37
	17700.00	89.70	0.29	10038.60	7872.94	7872.94	-17.62	0.00	389351.22	535935.39	N 32 4 13.40	W 104 13 2.36
	17800.00	89.70	0.29	10039.12	7972.94	7972.93	-17.12	0.00	389451.20	535935.89	N 32 4 14.39	W 104 13 2.35
	17900.00	89.70	0.29	10039.64	8072.94	8072.93	-16.62	0.00	389551.19	535936.39	N 32 4 15.38	W 104 13 2.35
	18000.00	89.70	0.29	10040.17	8172.93	8172.93	-16.12	0.00	389651.18	535936.89	N 32 4 16.37	W 104 13 2.34
	18100.00	89.70	0.29	10040.69	8272.93	8272.93	-15.62	0.00	389751.17	535937.39	N 32 4 17.36	W 104 13 2.33
	18200.00	89.70	0.29	10041.21	8372.93	8372.92	-15.11	0.00	389851.16	535937.89	N 32 4 18.35	W 104 13 2.32
	18300.00	89.70	0.29	10041.74	8472.92	8472.92	-14.61	0.00	389951.15	535938.39	N 32 4 19.34	W 104 13 2.32
	18400.00	89.70	0.29	10042.26	8572.92	8572.92	-14.11	0.00	390051.13	535938.89	N 32 4 20.33	W 104 13 2.31
	18500.00	89.70	0.29	10042.78	8672.92	8672.92	-13.61	0.00	390151.12	535939.39	N 32 4 21.32	W 104 13 2.30
	18600.00	89.70	0.29	10043.31	8772.92	8772.91	-13.11	0.00	390251.11	535939.89	N 32 4 22.31	W 104 13 2.30
	18700.00	89.70	0.29	10043.83	8872.91	8872.91	-12.61	0.00	390351.10	535940.39	N 32 4 23.30	W 104 13 2.29
	18800.00	89.70	0.29	10044.36	8972.91	8972.91	-12.11	0.00	390451.09	535940.89	N 32 4 24.28	W 104 13 2.28
	18900.00	89.70	0.29	10044.88	9072.91	9072.91	-11.61	0.00	390551.08	535941.39	N 32 4 25.27	W 104 13 2.27
	19000.00	89.70	0.29	10045.40	9172.90	9172.90	-11.11	0.00	390651.06	535941.89	N 32 4 26.26	W 104 13 2.27
	19100.00	89.70	0.29	10045.93	9272.90	9272.90	-10.60	0.00	390751.05	535942.40	N 32 4 27.25	W 104 13 2.26
	19200.00	89.70	0.29	10046.45	9372.90	9372.90	-10.10	0.00	390851.04	535942.90	N 32 4 28.24	W 104 13 2.25
	19300.00	89.70	0.29	10046.97	9472.90	9472.89	-9.60	0.00	390951.03	535943.40	N 32 4 29.23	W 104 13 2.25
	19400.00	89.70	0.29	10047.50	9572.89	9572.89	-9.10	0.00	391051.02	535943.90	N 32 4 30.22	W 104 13 2.24
	19500.00	89.70	0.29	10048.02	9672.89	9672.89	-8.60	0.00	391151.00	535944.40	N 32 4 31.21	W 104 13 2.23
	19600.00	89.70	0.29	10048.54	9772.89	9772.89	-8.09	0.00	391250.99	535944.91	N 32 4 32.20	W 104 13 2.23
	19700.00	89.70	0.29	10049.07	9872.89	9872.88	-7.59	0.00	391350.98	535945.41	N 32 4 33.19	W 104 13 2.22
	19800.00	89.70	0.29	10049.59	9972.88	9972.88	-7.09	0.00	391450.97	535945.91	N 32 4 34.18	W 104 13 2.21
	19900.00	89.70	0.29	10050.12	10072.88	10072.88	-6.59	0.00	391550.96	535946.41	N 32 4 35.17	W 104 13 2.20
	20000.00	89.70	0.29	10050.64	10172.88	10172.88	-6.08	0.00	391650.95	535946.92	N 32 4 36.16	W 104 13 2.20
	20100.00	89.70	0.29	10051.16	10272.87	10272.87	-5.58	0.00	391750.93	535947.42	N 32 4 37.15	W 104 13 2.19
	20200.00	89.70	0.29	10051.69	10372.87	10372.87	-5.08	0.00	391850.92	535947.92	N 32 4 38.14	W 104 13 2.18
	20300.00	89.70	0.29	10052.21	10472.87	10472.87	-4.58	0.00	391950.91	535948.42	N 32 4 39.13	W 104 13 2.18
	20400.00	89.70	0.29	10052.73	10572.87	10572.87	-4.07	0.00	392050.90	535948.93	N 32 4 40.12	W 104 13 2.17
	20500.00	89.70	0.29	10053.26	10672.86	10672.86	-3.57	0.00	392150.89	535949.43	N 32 4 41.11	W 104 13 2.16
	20600.00	89.70	0.29	10053.78	10772.86	10772.86	-3.07	0.00	392250.88	535949.93	N 32 4 42.10	W 104 13 2.15
Chevron HH SO 8 P2 14H - PBHL	20613.13	89.70	0.29	10053.85	10785.99	10785.99	-3.00	0.00	392264.00	535950.00	N 32 4 42.23	W 104 13 2.15

Survey Type: *Non-Def Plan*

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	33.000	1/100.000	30.000	30.000	SLB_MWD-STD-Depth Only	Original Borehole / Chevron HH SO 8 P2 14H Rev0 CJG 12Jan16
	1	33.000	20613.126	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Chevron HH SO 8 P2 14H Rev0 CJG 12Jan16

Generic Hayhurst Development Pad Layout - Phase 1

H2S Monitor Locations
- Bop/Cellar
- Rig Floor
- Shaker Skid
- Bell Nipple

Flag Locations
- Sign-in Shack
- Rig Floor
- Dog House

10 Minute Escape Packs
- 1 at Pits
- 1 at Trip Tank
- 1 at Accumulator
- 4 at Rig Floor

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

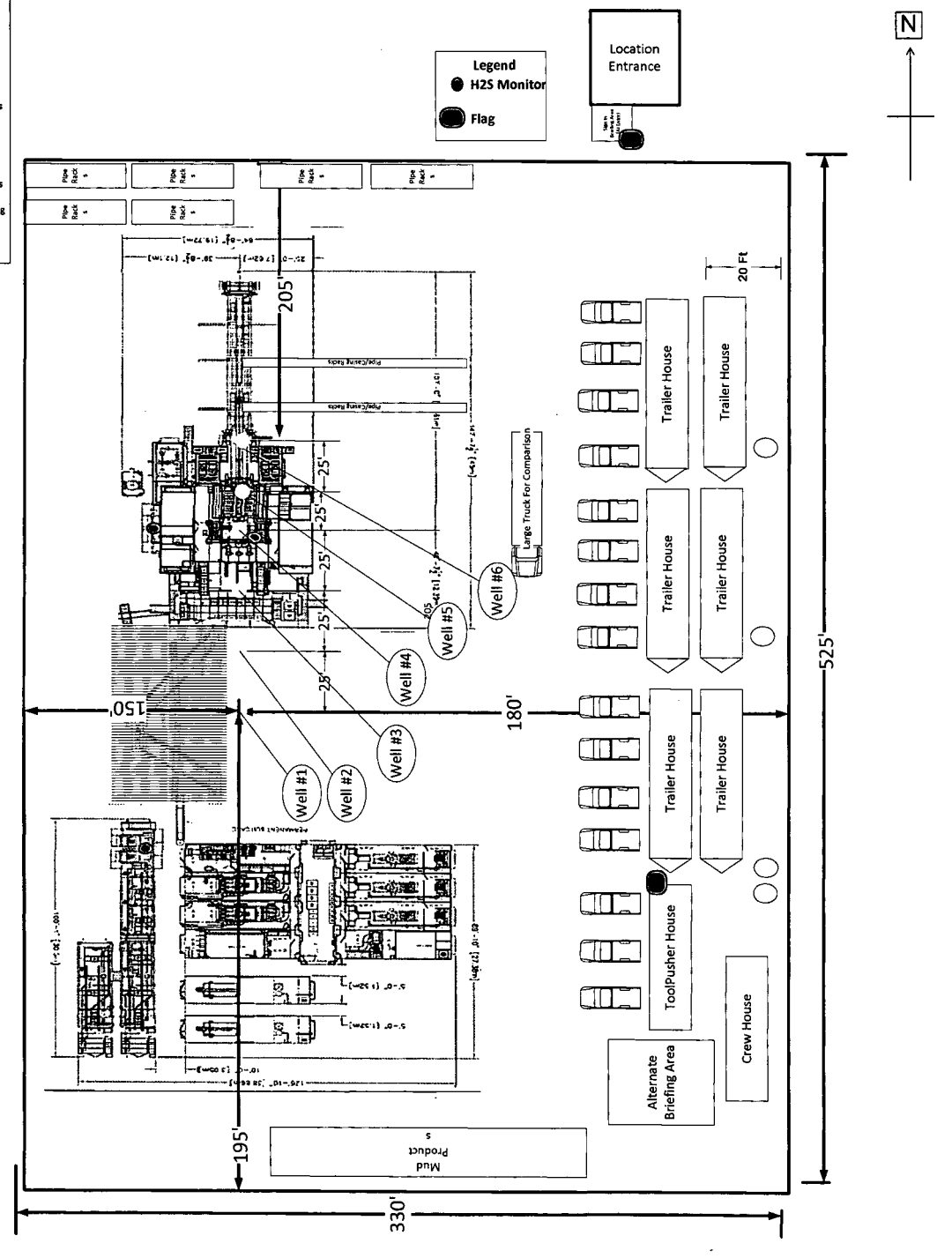
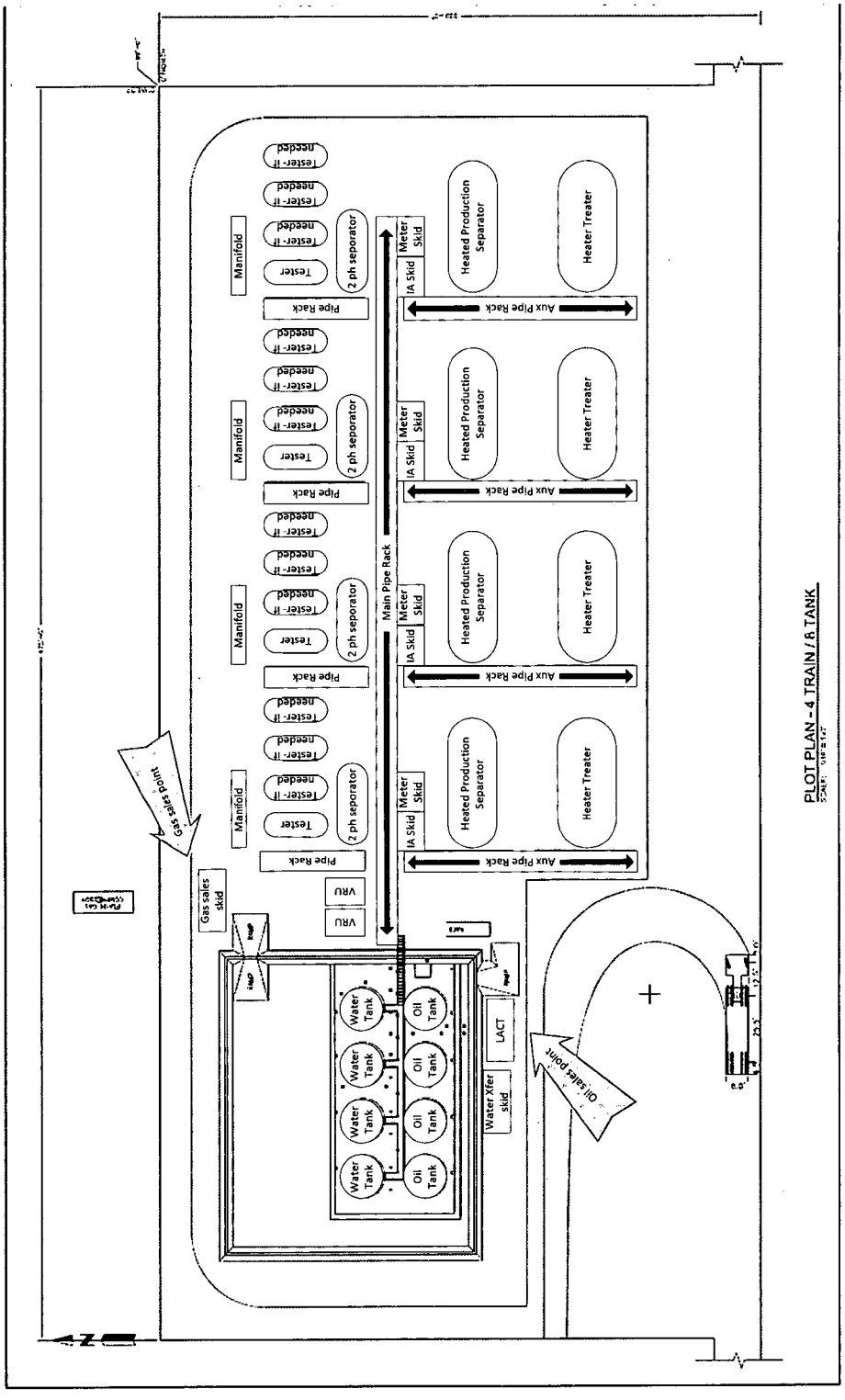


EXHIBIT 4


Main Pipe Rack
Aux Pipe Rack
IA Skid
Meter Skid
Heated Production Separator
Heater Treater
Manifold
Tester
Tester-if needed
2 ph seporator
Pipe Rack
VRU
Gas sales skid
Gas sales point
Oil sales point
Water Tank
Oil Tank
LACT
Water Xfer skid
PLOT PLAN - 4 TRAIN / 6 TANK

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

ROBERT L. LASTRAPES
NEW MEXICO
23006
1-8-2016
PROFESSIONAL SURVEYOR

Robert L. Lastrapes
Registration No. 23006

R 27 E

T 26 S

NW PAD CORNER		NE PAD CORNER		HH SO 8 P2 NO. 5H WELL	
X= 535,799	NAD 27	X= 536,129	NAD 27	X= 535,952	NAD 27
Y= 381,809		Y= 381,808		Y= 381,554	
ELEVATION +3241' NAVD 88		ELEVATION +3247' NAVD 88		LAT. 32.048953	
SW PAD CORNER		SE PAD CORNER		LONG. 104.217295	
X= 535,805	NAD 27	X= 536,135	NAD 27	X= 577,136	NAD83
Y= 381,284		Y= 381,284		Y= 381,611	
ELEVATION +3244' NAVD 88		ELEVATION +3256' NAVD 88		LAT. 32.049075	
				LONG. 104.217789	
				ELEVATION +3245' NAVD 88	

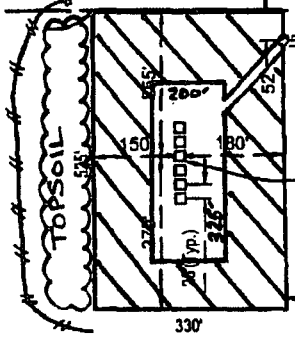
Sec. 8

Bureau of Land Management

EROSION CONTROL (STRAW WATTLES)

S 88°52'10" E 810.78'

Fnd. 2" Iron Pipe w/ Cap at the NW Corner of Section 17



HH SO 8 P2
No. 5H Well
255' FNL, 960' FWL

PROPOSED PAD
±3.98 Acres

CENTERLINE PROPOSED ACCESS ROAD (1)
24' X ±5,444.40'
±3.00 Acres
±329.96 Rods
(SEE PAGE 2)

Sec. 17

Bureau of Land Management

(Access Road 1) ± 4289.90': ±2.36 Acres ±259.99 Rods

NAD 27 NEW MEXICO EAST ZONE

Scale: 1" = 300'

300' 0 150' 300'

INTERIM RECLAMATION

SURFACE USE PLAT

CHEVRON U.S.A. INC.

PROPOSED PADS, FRAC POND & ACCESS ROADS
HH SO 8 P2
SECTIONS 9, 16 & 17, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: LJG	REVISIONS		
PROJ. MGR.: GDG	No. 1	DATE: 1/7/2016	REVISED BY: MBD
DATE: 12/22/2015	No.	DATE:	REVISED BY:
FILENAME: T:\2015\2153438\DWG\HH SO 8 P2 5H_SUP.dwg			

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135 Regency Sq. Lafayette, LA 70508
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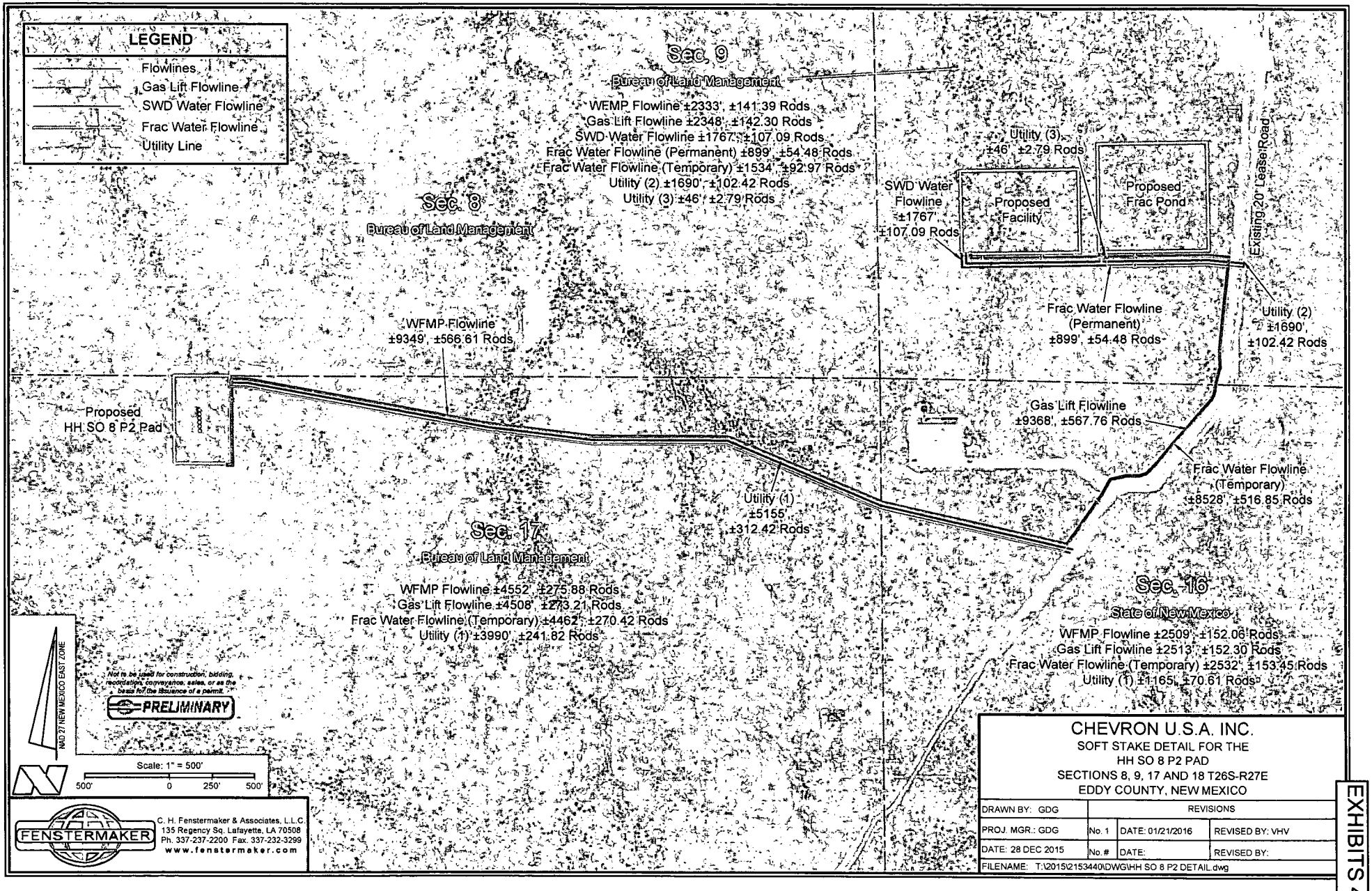
LEGEND
Flowlines
Gas Lift Flowline
SWD Water Flowline
Frac Water Flowline
Utility Line
Sec. 9
Bureau of Land Management
WEMP Flowline ±2333', ±141.39 Rods
Gas Lift Flowline ±2348', ±142.30 Rods
SWD Water Flowline ±1767', ±107.09 Rods
Frac Water Flowline (Permanent) ±899', ±54.48 Rods
Frac Water Flowline (Temporary) ±1534', ±92.97 Rods
Utility (2) ±1690', ±102.42 Rods
Utility (3) ±46', ±2.79 Rods
Sec. 8
Bureau of Land Management
Utility (3)
±46', ±2.79 Rods
SWD Water
Flowline
±1767'
±107.09 Rods
Proposed
Facility
Proposed
Frac Pond
Existing 20' Lease Road
Frac Water Flowline
(Permanent)
±899', ±54.48 Rods
Utility (2)
±1690',
±102.42 Rods
WFMP Flowline
±9349', ±566.61 Rods
Proposed
HH SO 8 P2 Pad
Gas Lift Flowline
±9368', ±567.76 Rods
Frac Water Flowline
(Temporary)
±8528', ±516.85 Rods
Utility (1)
±5155'
±312.42 Rods
Sec. 17
Bureau of Land Management
WFMP Flowline ±4552', ±275.88 Rods
Gas Lift Flowline ±4508', ±273.21 Rods
Frac Water Flowline (Temporary) ±4462', ±270.42 Rods
Utility (1) ±3990', ±241.82 Rods
Sec. 16
State of New Mexico
WFMP Flowline ±2509', ±152.06 Rods
Gas Lift Flowline ±2513', ±152.30 Rods
Frac Water Flowline (Temporary) ±2532', ±153.45 Rods
Utility (1) ±1165', ±70.61 Rods
NAD 27 NEW MEXICO EAST ZONE
Not to be used for construction, bidding, recordation, conveyance, sales, or as the basis for the issuance of a permit.
PRELIMINARY
Scale: 1" = 500'
500' 0 250' 500'
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www.fenstermaker.com
CHEVRON U.S.A. INC.
SOFT STAKE DETAIL FOR THE
HH SO 8 P2 PAD
SECTIONS 8, 9, 17 AND 18 T26S-R27E
EDDY COUNTY, NEW MEXICO
DRAWN BY: GDG
PROJ. MGR.: GDG
DATE: 28 DEC 2015
REVISIONS
No. 1 DATE: 01/21/2016 REVISED BY: VHV
No.# DATE: REVISED BY:
FILENAME: T:\2015\2153440\DWG\HH SO 8 P2 DETAIL.dwg

EXHIBITS 4&5

CHEVRON U.S.A. Inc
HH SO 8 P2 14H
NMNM 118108
SECTION 17, T26S-R27E (Off Lease SHL) SECTION 5, T26S, R27E
SHL 330' FNL & 960' FWL BHL 180' FNL & 996' FWL

APD Surface Use Plan of Operations

This Surface Use Plan of Operations has been designed to be reviewed in conjunction with Hayhurst Development Area (HDA) Master Development Plan

HDA Master Development Plan Reference Table
The contents referenced below apply to all HDA APD's

Existing Roads	Exhibit 1, MDP SUPO Page 1
Construction Materials	MDP SUPO Page 6
Methods for Handling Waste	MDP SUPO Page 6
Reclamation Objectives	MDP SUPO Page 6-8
Final Surface Reclamation	MDP SUPO Page 6-8

Driving Directions

- Driving Directions – From Malaga, New Mexico. The location is approximately 11.5 miles from the nearest town, which is Malaga, New Mexico. From Malaga, proceed South on Highway 285 approximately 11.5 miles and turn right (West) onto White City Rd and go approximately 7.5 miles on White City Road until the road reaches an intersection with a permanent sign reading "Chevron Access". Turn left onto this and travel 1 mile, then right and travel for another .5 miles to the well location.

New or Reconstructed Access Roads – (Exhibit 2, MDP SUPO Pg. 1)

- There will be 7172' of new road construction for this proposal.
- Ditches: See Exhibit 2 (To be submitted at later date)
- Culverts: See Exhibit 2 (To be submitted at later date)
- Road Cuts: See Exhibit 2 (To be submitted at later date)

Location of Existing Wells (Exhibit 3)

- 1-Mile radius map is attached

CHEVRON U.S.A. Inc
HH SO 8 P2 14H
NMNM 118108
SECTION 17, T26S-R27E (Off Lease SHL) SECTION 5, T26S, R27E
SHL 330' FNL & 960' FWL BHL 180' FNL & 996' FWL

Location of Existing and/or Proposed Production Facilities (Exhibit 4, MDP SUP Pg. 2)

- Facilities: Proposed production facilities located in the SW corner of Sec. 9, T26S-R27E where oil and gas sales will take place.
    - The proposed facility and frac pond is in Sec. 9, T26S-R27E
    - Gas purchaser pipeline is in place at the tank battery.
    - 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. **Notification will be provided to BLM upon site selection and survey – plats (including SWD well information) will be provided.**
- Pipelines: See Detail – Exhibit 5
    - Pipelines Include:
        - 9,349' of Flowlines carrying production (buried)
        - 9,368' Gas Lift Line carrying pressurized gas (buried)
        - 1,767' SWD Line carrying produced water (buried)
        - 899' Permanent Frac water line carrying fresh water (buried)
        - 8528' Temporary Water line carrying fresh water (surface)
    - A ROW will be applied for through the State and BLM.
    - All construction activity will be confined to the approved ROW.
    - Pipeline will run parallel to the road and will stay within approved ROW.
- Power lines\Utility lines: 6,891' of new power lines

Location and Types of Water Supply (Exhibit 5, MDP SUPO Pg. 5)

- Proposed pond in Section 9, T26S-R27E will be utilized for fresh water.
- Fresh water will be obtained from a private water source.

Construction Materials (MDP SUPO Pg. 6)

- Location-specific caliche sources will be provided in post-application supplement

CHEVRON U.S.A. Inc
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NMNM 118108
SECTION 17, T26S-R27E (Off Lease SHL) SECTION 5, T26S, R27E
SHL 330' FNL & 960' FWL BHL 180' FNL & 996' FWL

Well Site Layout (Exhibit 6)

- Surveyor Plat (Exhibit 6a)
  - Exterior well pad dimensions are 525' x 330'
  - Interior well pad dimensions from point of entry (well head) of the well are N-330', S-195', E-180', W-150'. Total disturbance area needed for construction of well pad will be approximately 4 acres
  - Topsoil placement is on the west where interim reclamation is planned to be completed upon completion of well and evaluation of best management practices.
  - Cut and fill: will be minimal.
- Rig Layout (Exhibit 6b)

Plans for Surface Reclamation (Exhibit 6, MDP SUPA Pg. 8)

Interim Reclamation Procedures

- Reclaimed pad size: 200' x 325'
- See Exhibit for reclaimed pad layout, topsoil location & erosion control features

Surface Ownership

- BLM Surface
  - Surface Tenant – Phillip Stell 128 SW 3-10-16
- **Nearest Post Office:** Malaga Post Office; ~~11.4~~ Miles ~~north~~ BM

Other Information

- On-site performed by BLM NRS: Paul Murphy ~~11/4/2015~~ 12-8-16
- Cultural report attached: **Yes** Participating Agreement attached: N/A

CHEVRON U.S.A. Inc
HH SO 8 P2 14H
NMNM 118108
SECTION 17, T26S-R27E (Off Lease SHL) SECTION 5, T26S, R27E
SHL 330' FNL & 960' FWL BHL 180' FNL & 996' FWL

Chevron Representatives

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

Chevron Functional Contacts

Project Manager Name: Sean Cheben Address: 1400 Smith Street Houston, TX 77002 Phone: (432) 664-6809 Email: Sean.Cheben@chevron.com	**Drilling Engineer** Name: Roderick Milligan Address: 1400 Smith Street Houston, TX 77002 Phone: (281) 413-9794 Email: RoderickMilligan@chevron.com
Surface Land Representative Name: Kevin Dickerson Address: 15 Smith Road Midland Texas 79705 Phone: (432) 687-7104 Email: Kevin.Dickerson@chevron.com	**Facility Lead** Name: Tyler Weaver Address: 1400 Smith Street Houston, TX 77002 Phone: (281) 384-8934 Email: tyler.weaver@chevron.com
Geologist Name: Jeff Fabre Address: 1400 Smith Street Houston, TX 77002 Phone: (713) 372-0523 Email: JeffreyFabre@chevron.com	**Regulatory Specialist** Cindy Herrera-Murillo Address: 1616 W. Bender Blvd, Hobbs, NM 88240 Office: (575) 263-0431 Email: CHerreraMurillo@chevron.com

CHEVRON U.S.A. Inc
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NMNM 118108
SECTION 17, T26S-R27E (Off Lease SHL) SECTION 5, T26S, R27E
SHL 330' FNL & 960' FWL BHL 180' FNL & 996' FWL

EXHIBITS:

Exhibit 1 -- Existing Roads

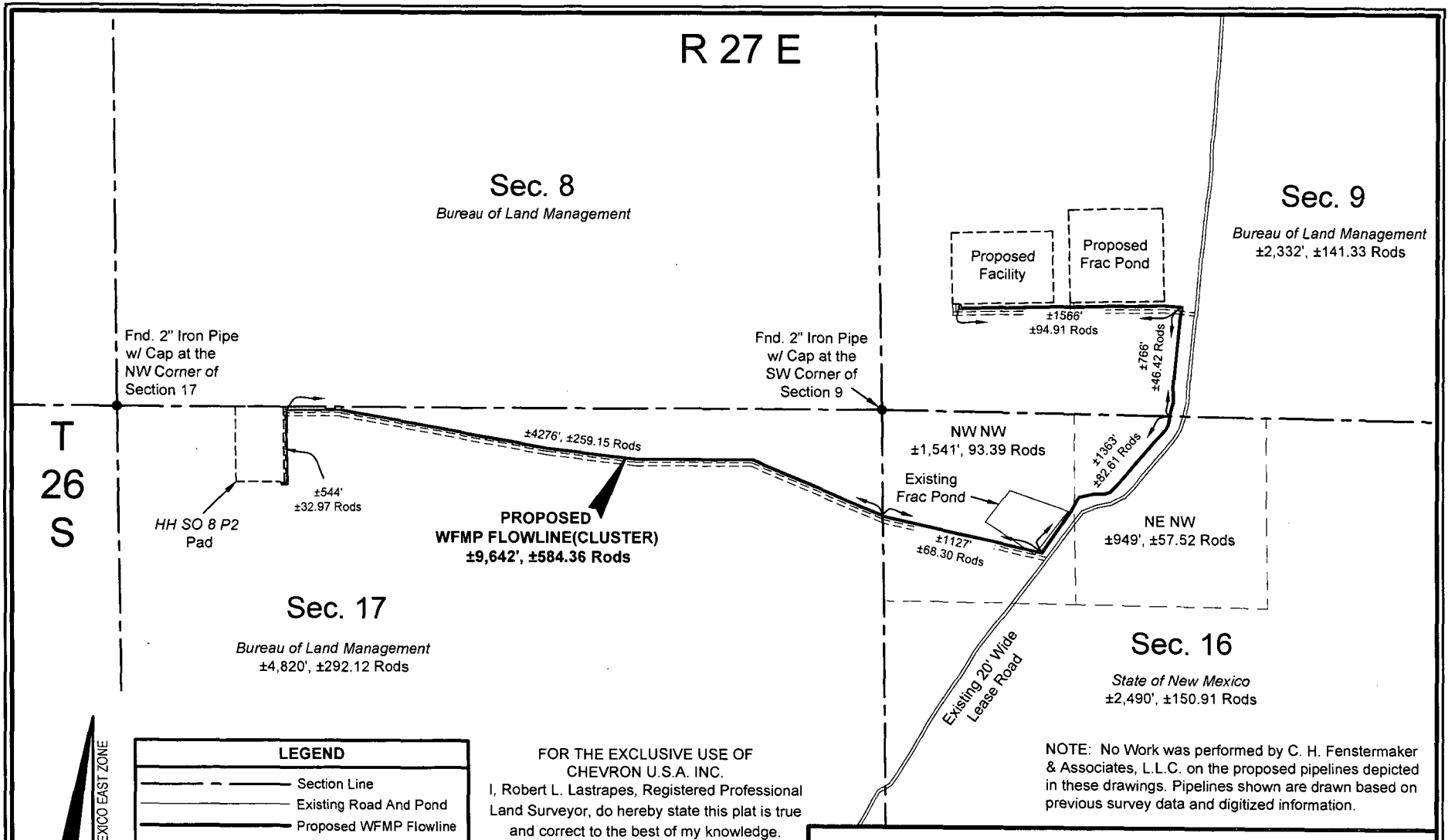
Exhibit 2 -- Survey Plat: New or Reconstructed Roads Map: if road is outside 600' x 600'.

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



NOTE: No Work was performed by C. H. Fenstermaker & Associates, L.L.C. on the proposed pipelines depicted in these drawings. Pipelines shown are drawn based on previous survey data and digitized information.

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

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

Not to be used for construction, bidding, recordation, conveyance, sales, or as the basis for the issuance of a permit.

PRELIMINARY

Robert L. Lastrapes
Registration No. 23006

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

SURFACE USE PLAT

CHEVRON U.S.A. INC.

PROPOSED WFMP FLOWLINE(CLUSTER)
HH SO 8 P2
SECTIONS 9, 16 & 17, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: BOR	REVISIONS		
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:
DATE: 02/11/2016	No.	DATE:	REVISED BY:
FILENAME: T:\2015\2153440\DWG\WFMP FL_SUP.dwg			

EXHIBIT 5

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

NOTE:

1. 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.

2. 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

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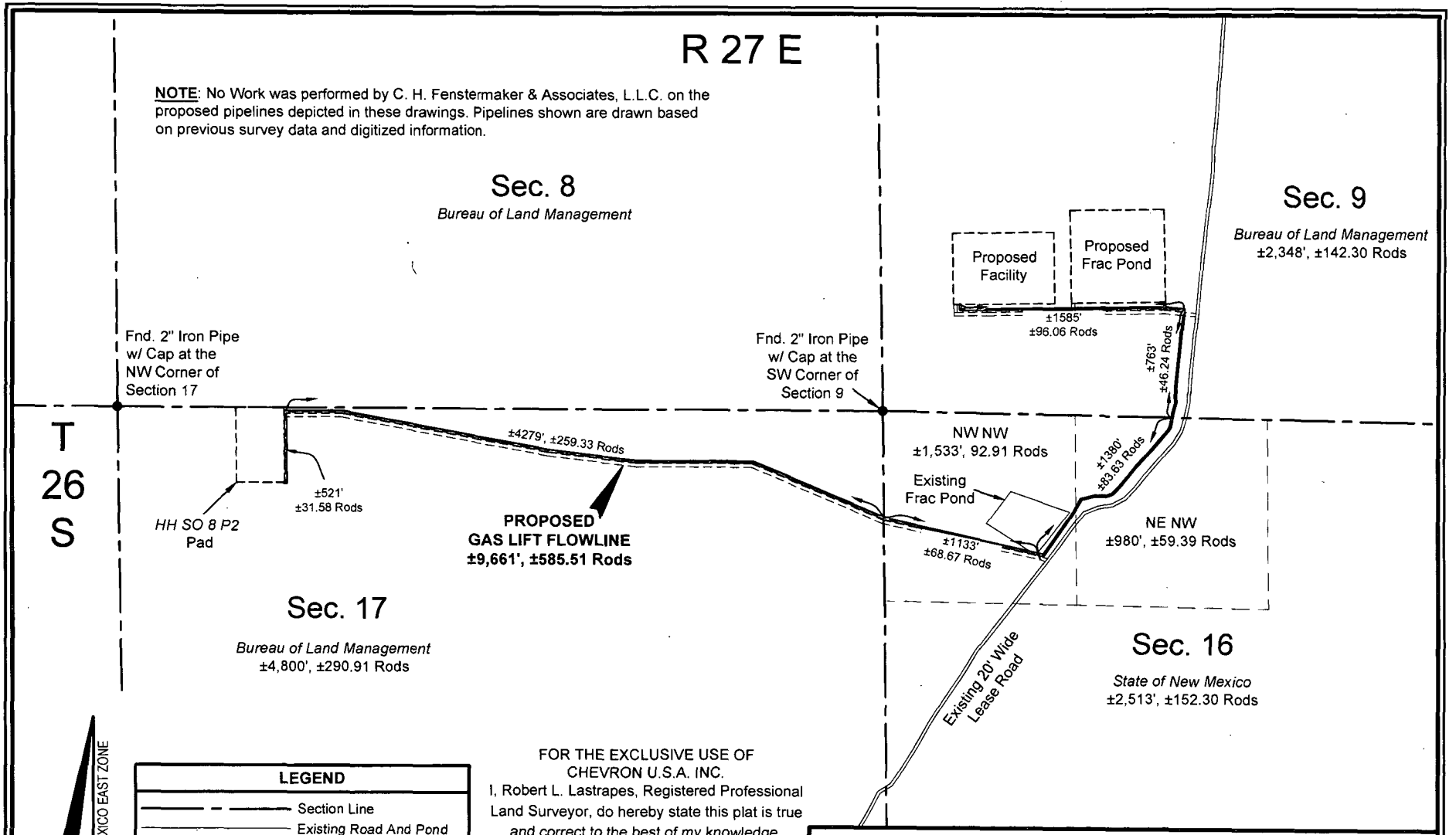
CHEVRON U.S.A. INC.

PROPOSED WFMP FLOWLINE(CLUSTER)
HH SO 8 P2
SECTIONS 9, 16 & 17, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: BOR	REVISIONS		
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:
DATE: 02/11/2016	No.	DATE:	REVISED BY:
FILENAME: T:\2015\2153440\DWG\WFMP FL_SUP.dwg			



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SURFACE USE PLAT

CHEVRON U.S.A. INC.

PROPOSED GAS LIFT FLOWLINE
HH SO 8 P2
SECTIONS 9, 16 & 17, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: BOR	REVISIONS		
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:
DATE: 02/11/2016	No.	DATE:	REVISED BY:
FILENAME: T:\2015\2153440\DWG\Gas Lift FL_SUP.dwg			

EXHIBIT 5

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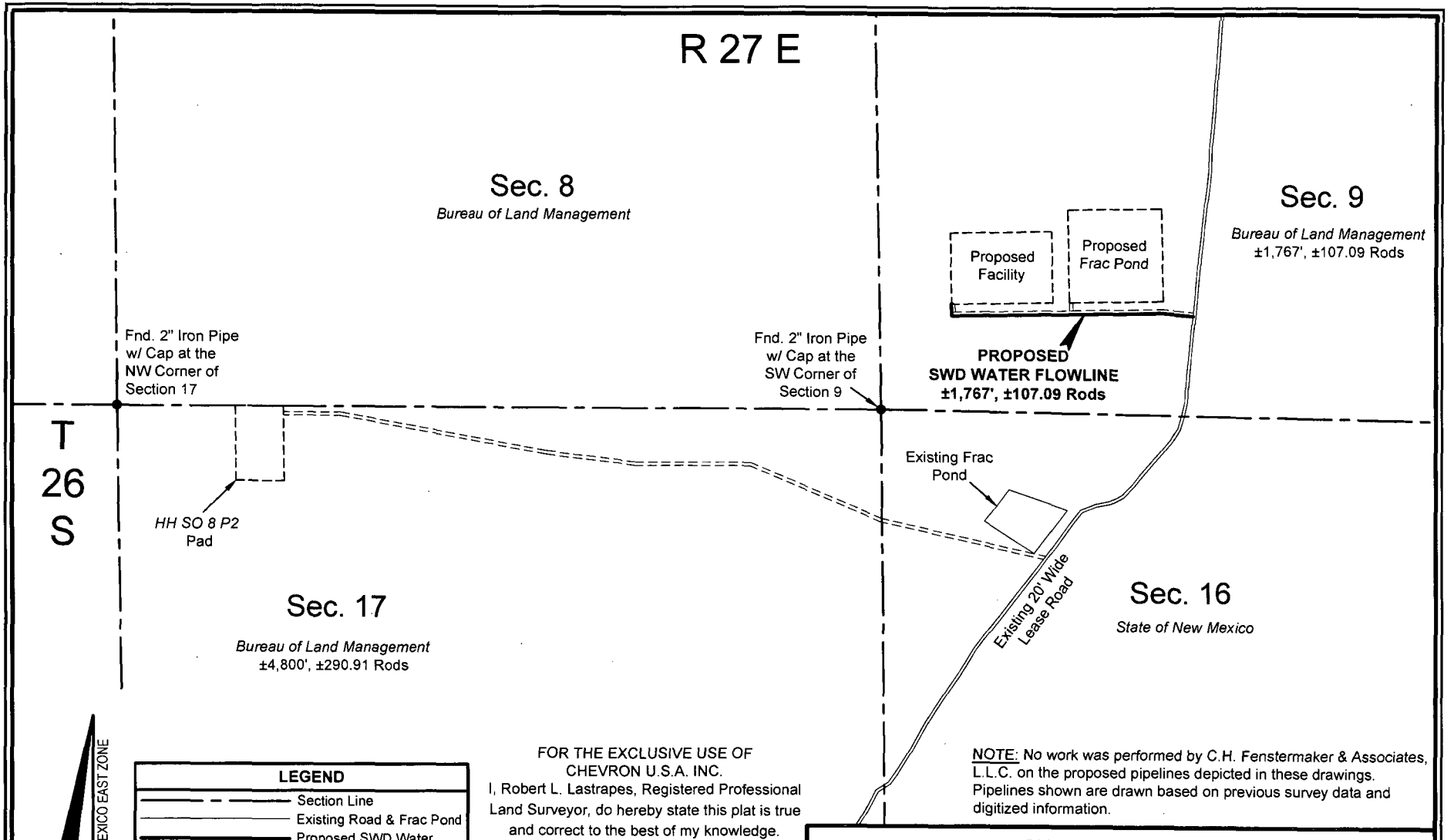
SURFACE USE PLAT

CHEVRON U.S.A. INC.

PROPOSED GAS LIFT FLOWLINE
HH SO 8 P2
SECTIONS 9, 16 & 17, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: BOR	REVISIONS		
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:
DATE: 02/11/2016	No.	DATE:	REVISED BY:
FILENAME: T:\2015\2153440\DWG\Gas Lift FL_SUP.dwg			



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SURFACE USE PLAT

CHEVRON U.S.A. INC.

PROPOSED SWD WATER FLOWLINE
HH SO 8 P2
SECTION 9, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: VHV	REVISIONS		
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:
DATE: 02/11/2016	No.	DATE:	REVISED BY:
FILENAME: T:\2015\2153440\DWG\SWD Water FL_SUP.dwg			

EXHIBIT 5

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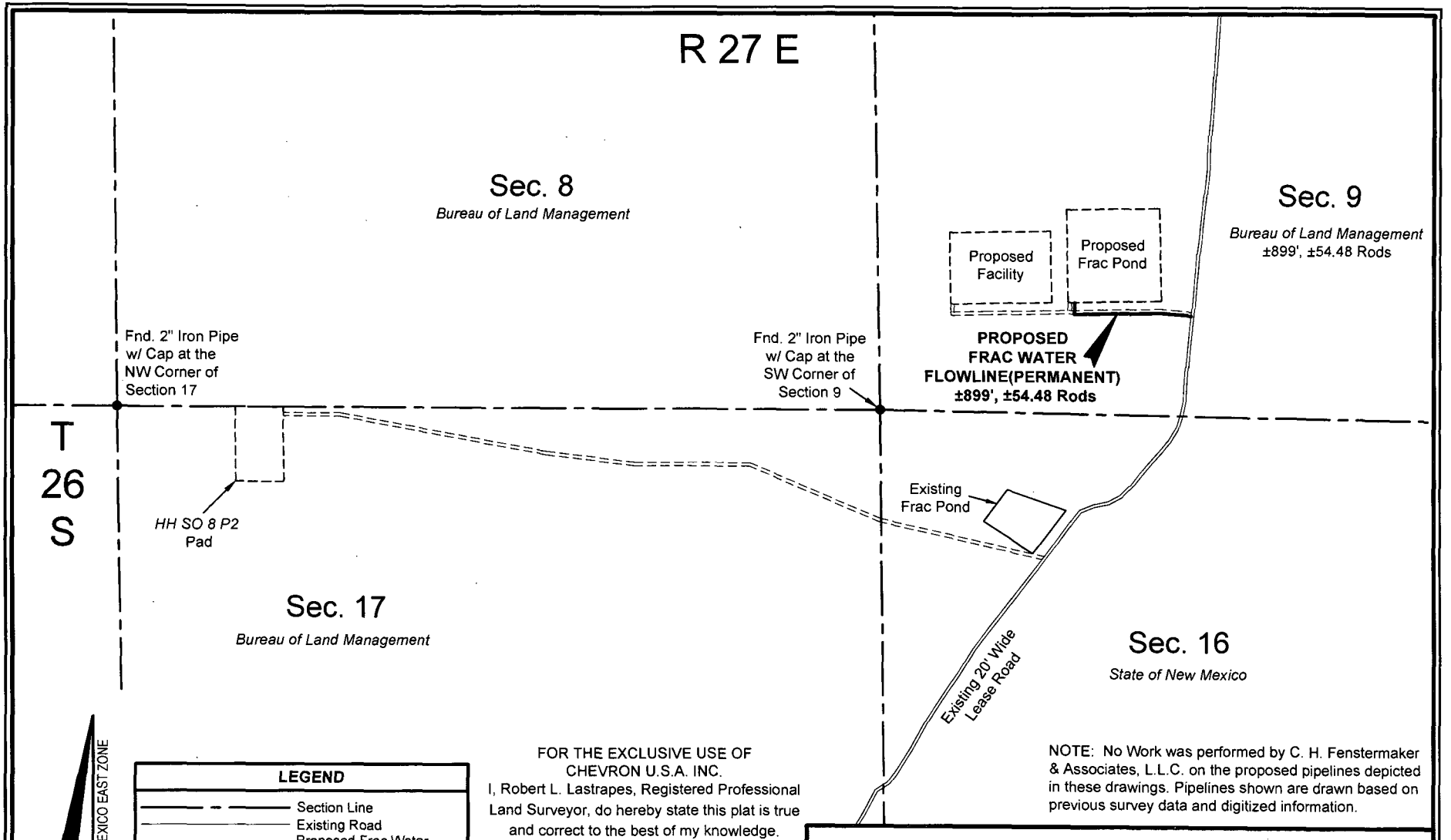
HH SO 8 P2
SECTION 9, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: VHV	REVISIONS		
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:
DATE: 02/11/2016	No.	DATE:	REVISED BY:
FILENAME: T:\2015\2153440\DWG\SWD Water FL_SUP.dwg			



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

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

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SURFACE USE PLAT

CHEVRON U.S.A. INC.

PROPOSED FRAC WATER FLOWLINE(PERMANENT)
HH SO 8 P2
SECTION 9, T26S-R27E
EDDY COUNTY, NEW MEXICO

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

Not to be used for construction, bidding, recordation, conveyance, sales, or as the basis for the issuance of a permit.

PRELIMINARY

Robert L. Lastrapes
Registration No. 23006

DRAWN BY: BOR	REVISIONS			
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:	
DATE: 02/11/2016	No.	DATE:	REVISED BY:	
FILENAME: T:\2015\2153440\DWG\Frac Water FL_Perm_SUP.dwg				

EXHIBIT 5

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PROPOSED FRAC WATER FLOWLINE(PERMANENT)
HH SO 8 P2
SECTION 9, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: BOR	REVISIONS		
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:
DATE: 02/11/2016	No.	DATE:	REVISED BY:
FILENAME: T:\2015\2153440\DWG\Frac Water FL_Perm_SUP.dwg			

R 27 E

NOTE: No Work was performed by C. H. Fenstermaker & Associates, L.L.C. on the proposed pipelines depicted in these drawings. Pipelines shown are drawn based on previous survey data and digitized information.

Sec. 8
Bureau of Land Management

Sec. 9
Bureau of Land Management
±1,534', ±92.97 Rods

Proposed Facility

Proposed Frac Pond

±773'
±46.85 Rods

±761'
±46.12 Rods

Fnd. 2" Iron Pipe w/ Cap at the NW Corner of Section 17

Fnd. 2" Iron Pipe w/ Cap at the SW Corner of Section 9

T 26 S

±473', ±28.67 Rods

±473'
±28.67 Rods

HH SO 8 P2 Pad

PROPOSED FRAC WATER FLOWLINE(TEMPORARY) ±8,820', ±534.55 Rods

NW NW
±1,548', 93.82 Rods

±1423'
±86.24 Rods

Existing Frac Pond

±1109'
±67.21 Rods

NE NW
±984', ±59.64 Rods

Sec. 17
Bureau of Land Management
±4,754', ±288.12 Rods

Sec. 16
State of New Mexico
±2,532', ±153.45 Rods

Existing 20' Wide Lease Road

NAD 27 NEW MEXICO EAST ZONE

LEGEND

- Section Line
- Existing Road And Pond
- Proposed Frac Water Flowline(Temporary)
- Proposed Access Road, Frac Pump, Tank Battery, Compressor Station & Pad
- Found Occupation

Scale: 1" = 1000'

1000' 0 500' 1000'

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SURFACE USE PLAT

CHEVRON U.S.A. INC.

PROPOSED FRAC WATER FLOWLINE(TEMPORARY)
HH SO 8 P2
SECTIONS 9, 16 & 17, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: BOR	REVISIONS		
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:
DATE: 02/11/2016	No.	DATE:	REVISED BY:
FILENAME: T:\2015\2153440\DWG\Frac Water FL_Temp_SUP.dwg			

EXHIBIT 5

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PROPOSED FRAC WATER FLOWLINE(TEMPORARY)
HH SO 8 P2
SECTIONS 9, 16 & 17, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: BOR	REVISIONS		
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:
DATE: 02/11/2016	No.	DATE:	REVISED BY:
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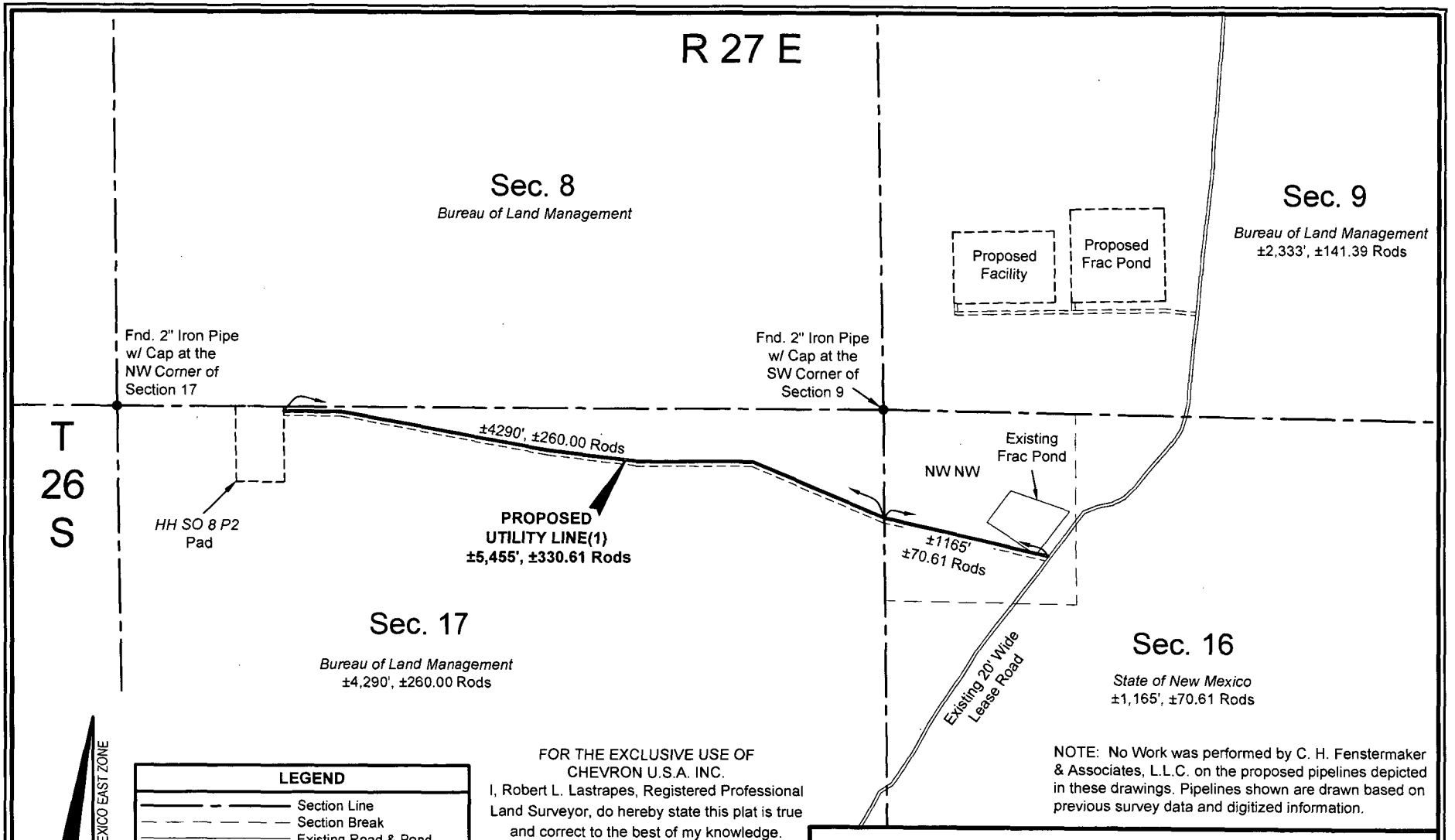

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PROPOSED UTILITY LINE(1)
HH SO 8 P2
SECTIONS 16 & 17, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: BOR	REVISIONS		
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:
DATE: 02/11/2016	No.	DATE:	REVISED BY:
FILENAME: T:\2015\2153440\DWG\Utility 1_SUP.dwg			

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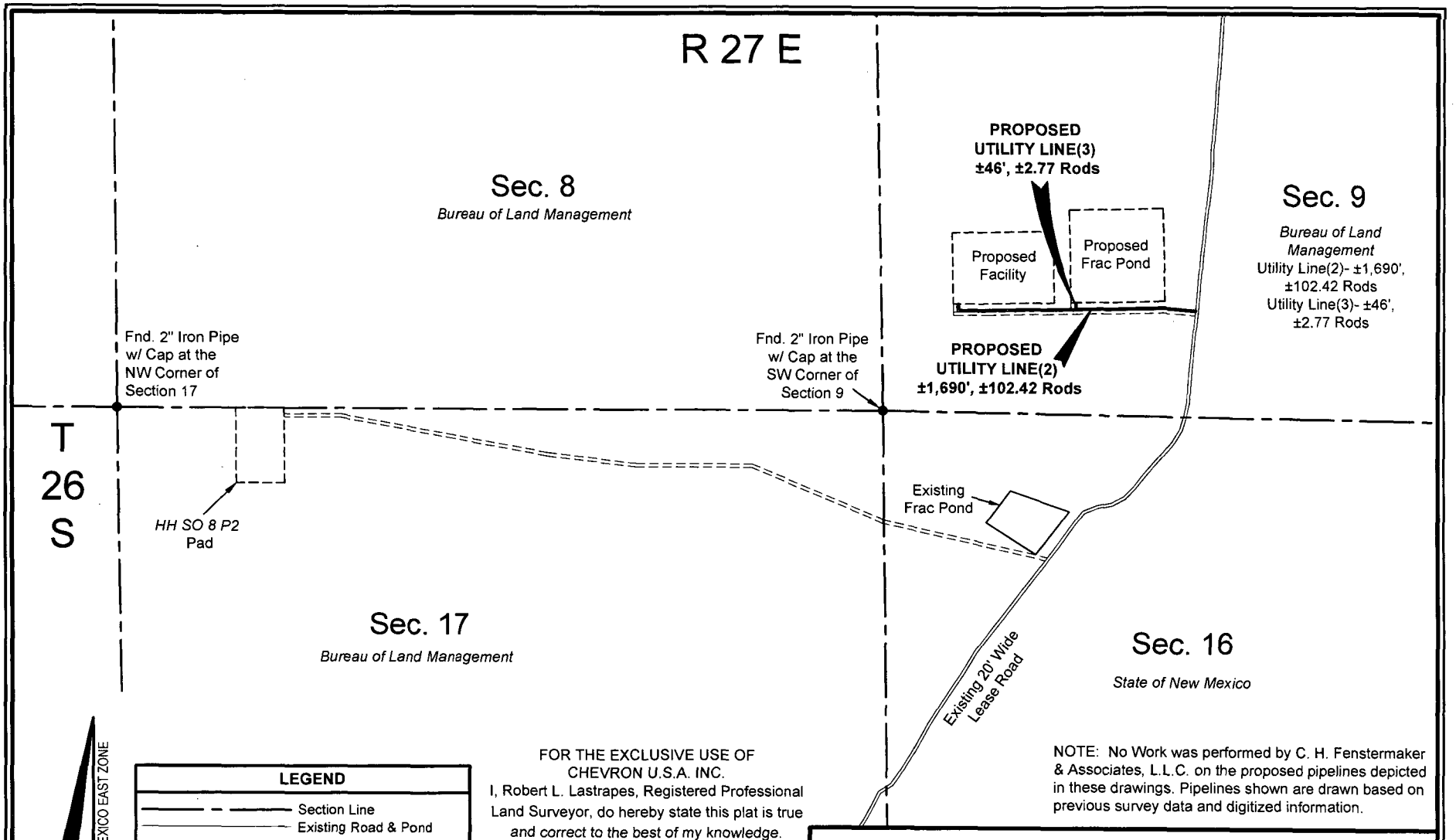
HH SO 8 P2
SECTIONS 16 & 17, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: BOR	REVISIONS		
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:
DATE: 02/11/2016	No.	DATE:	REVISED BY:
FILENAME: T:\2015\2153440\DWG\Utility 1_SUP.dwg			



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SURFACE USE PLAT

CHEVRON U.S.A. INC.

PROPOSED UTILITY LINE(2 & 3)
HH SO 8 P2
SECTION 9, T26S-R27E
EDDY COUNTY, NEW MEXICO

PAGE 1 OF 2

FENSTERMAKER
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SECTION 9, T26S-R27E
EDDY COUNTY, NEW MEXICO

DRAWN BY: BOR	REVISIONS		
PROJ. MGR.: GDG	No.	DATE:	REVISED BY:
DATE: 02/11/2016	No.	DATE:	REVISED BY:
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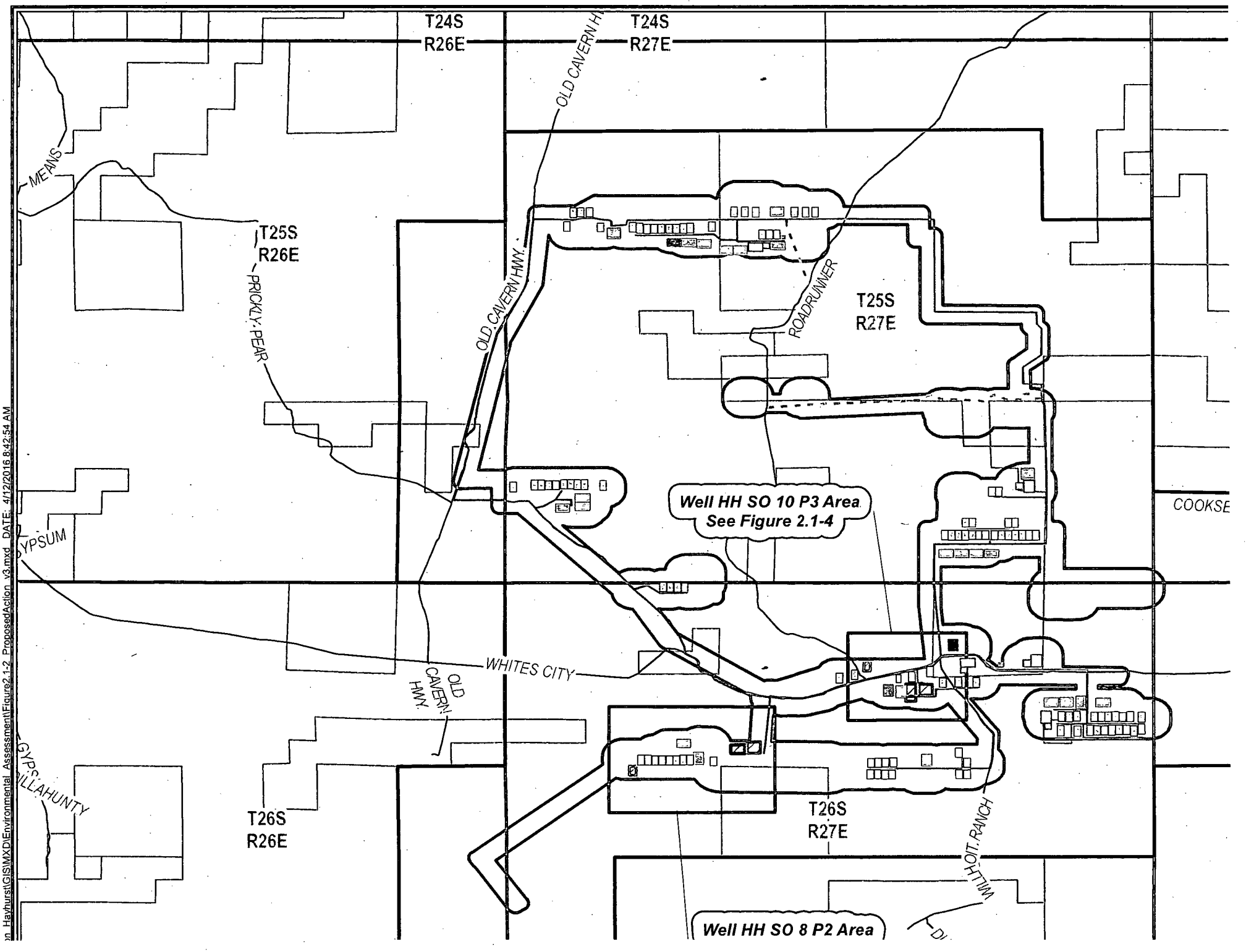

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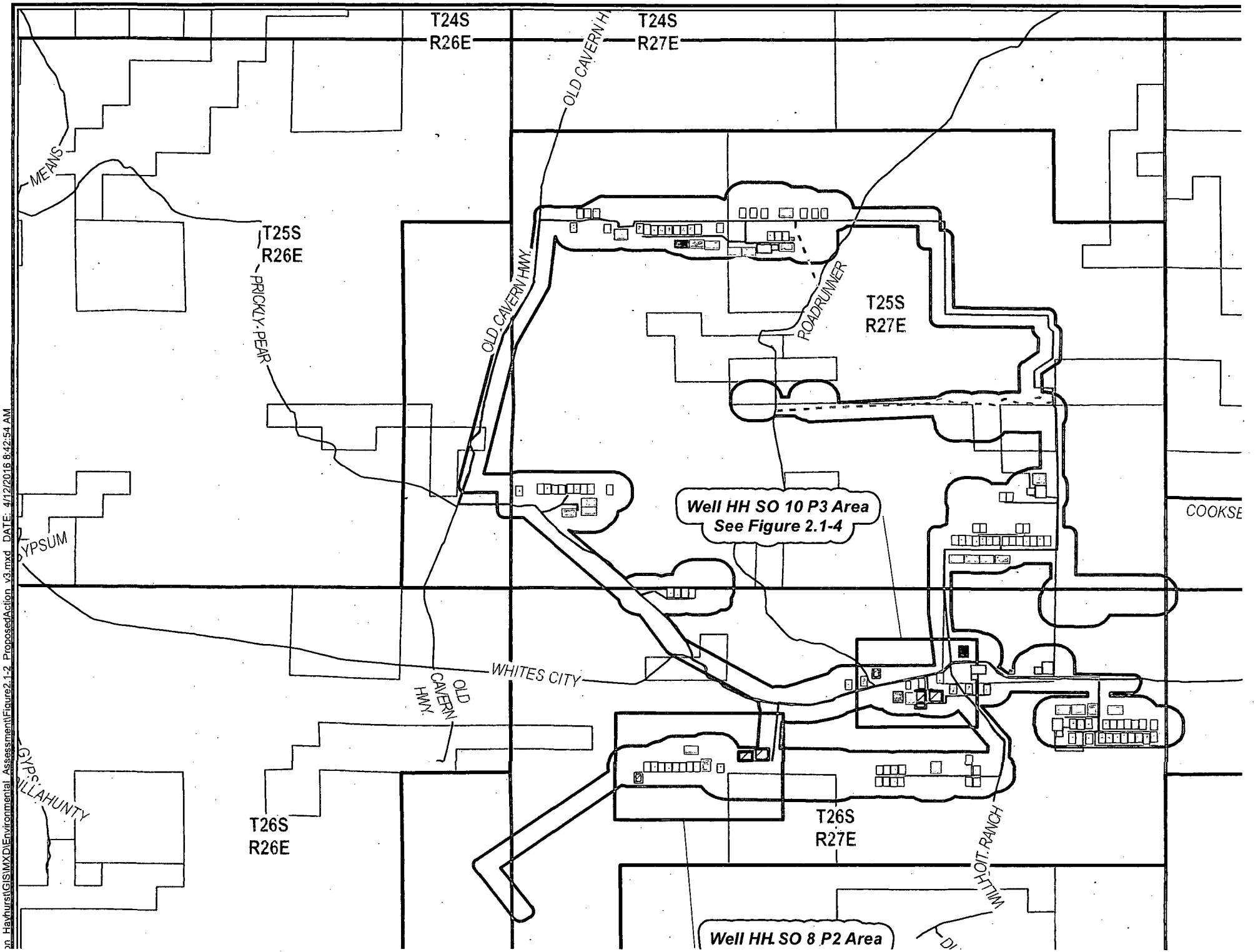

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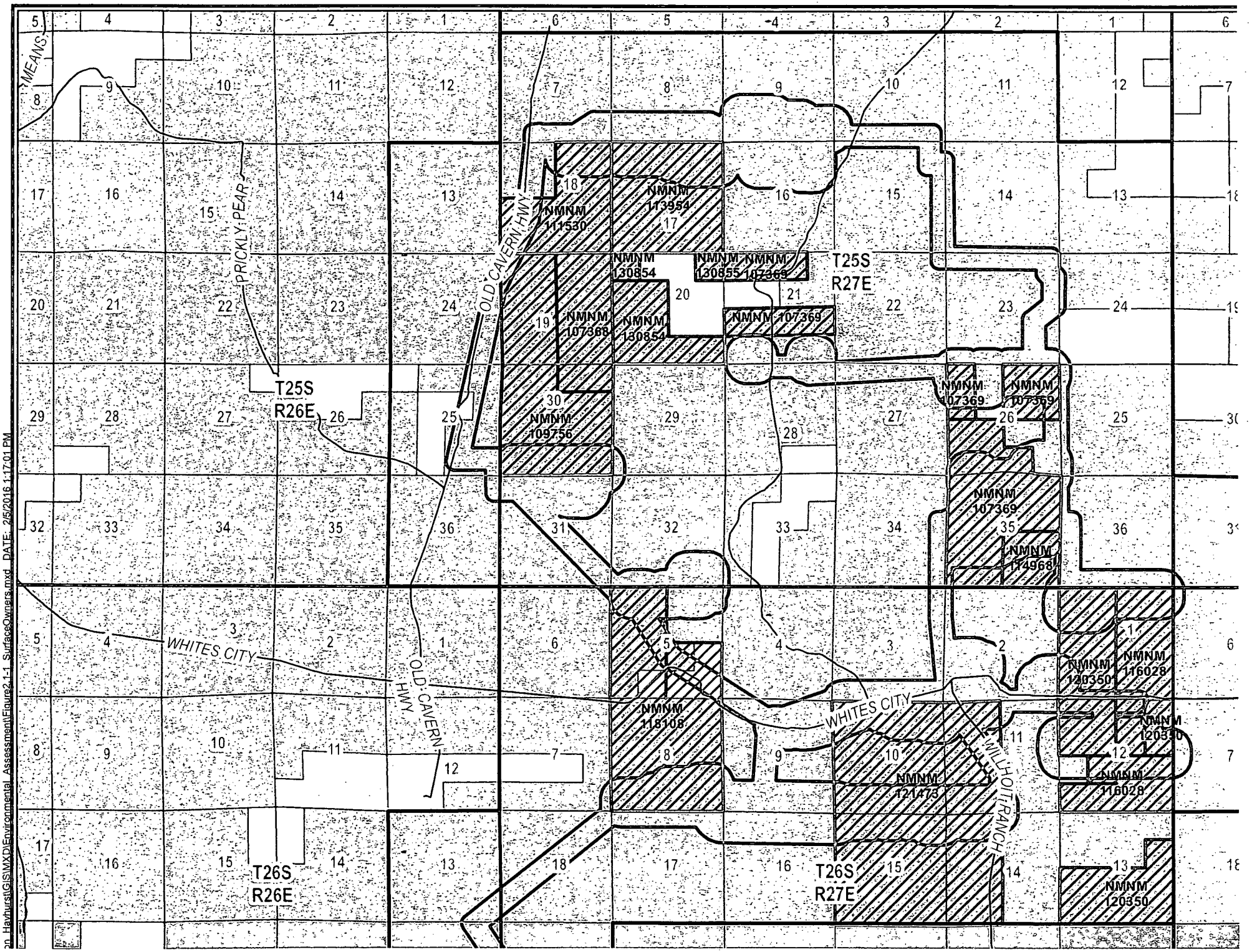

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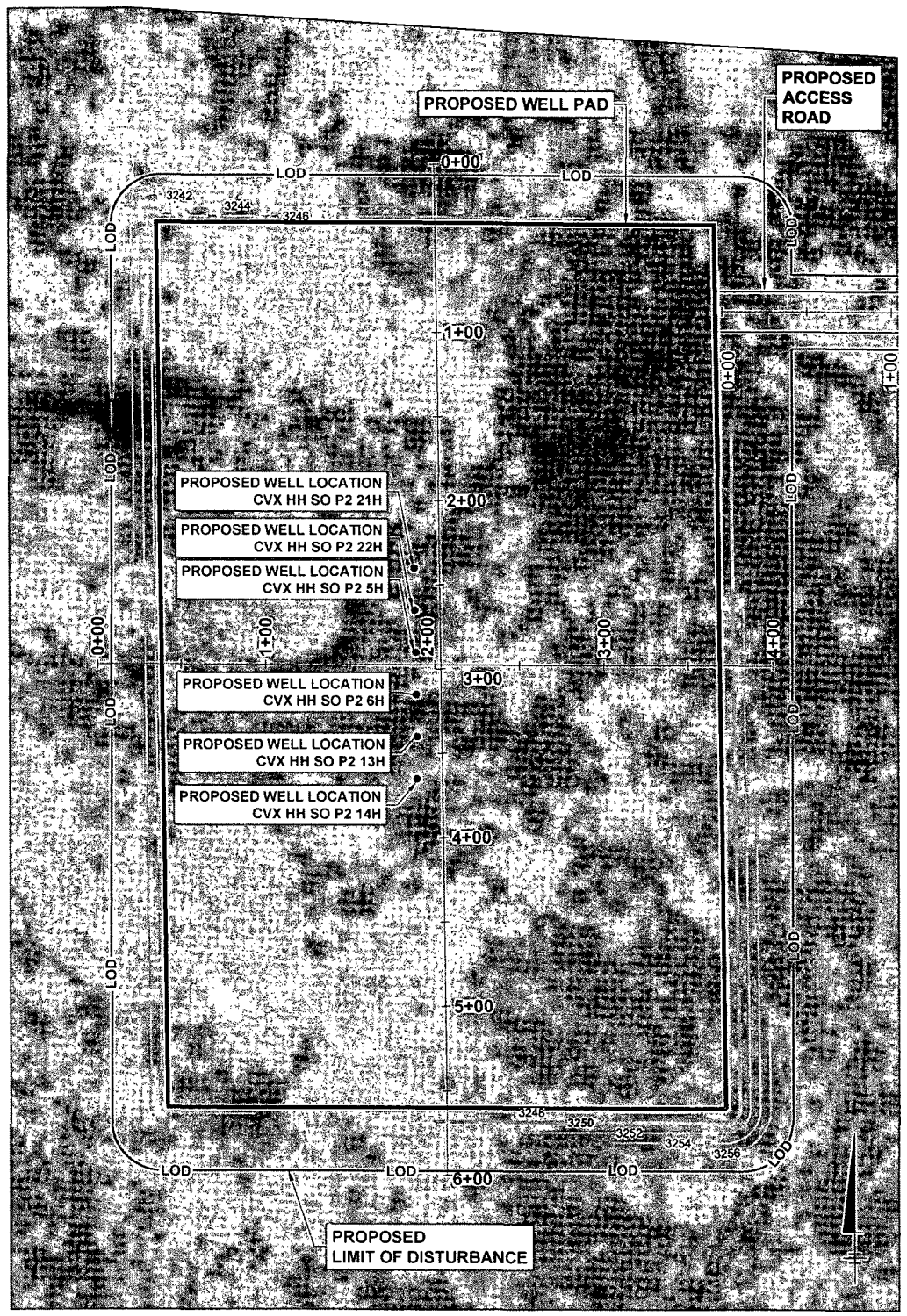
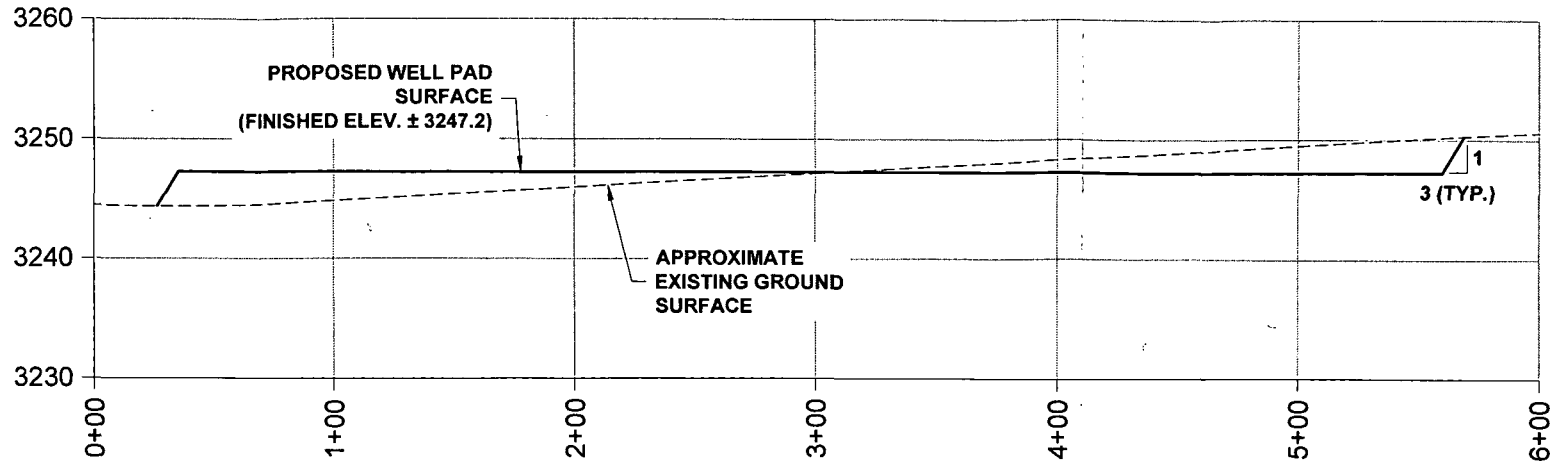


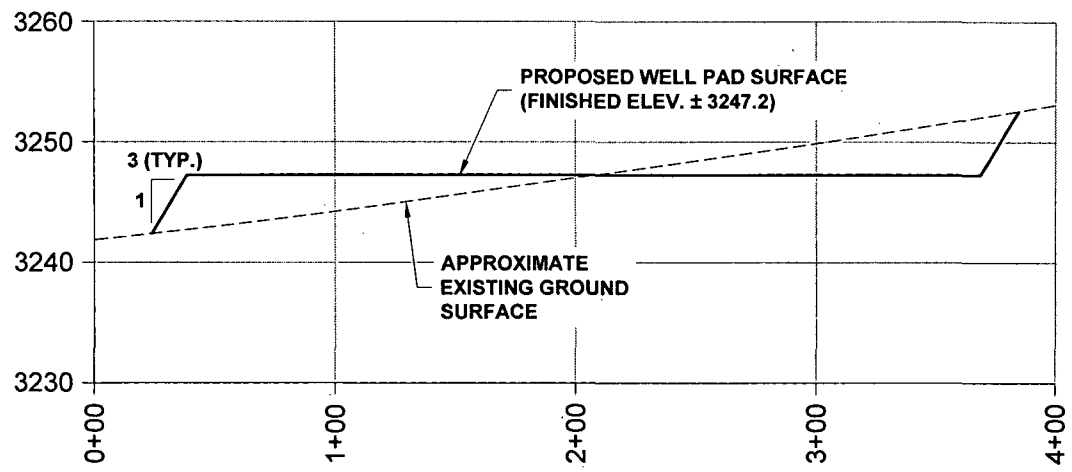
PLAN

1"=50' 50' 0 50' 100'

APPROXIMATE WELL PAD DISTURBANCE AREA: 5.5 ACRES
ACCESS ROAD DISTURBANCE AREA: 5.5 ACRES



NORTH-SOUTH CROSS-SECTION



EAST-WEST CROSS-SECTION

1"=40' 40' 0 40' 80'
HORIZONTAL SCALE

1"=8' 8' 0 8' 16'
VERTICAL SCALE

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IMAGES:
Pad 2 AR.tif
primary_BW.gif

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USE TO VERIFY

No.	Date	Revisions	By	Ckd

SCALE IDENTIFIED IN THE TITLE BLOCK

Professional Engineer's Name: HUGH B. ROBOTHAM
Professional Engineer's No.: 9933
State: NM | Date Signed | Project Mgr.: NM
Designed by | Drawn by: ALS | Checked by: HBR

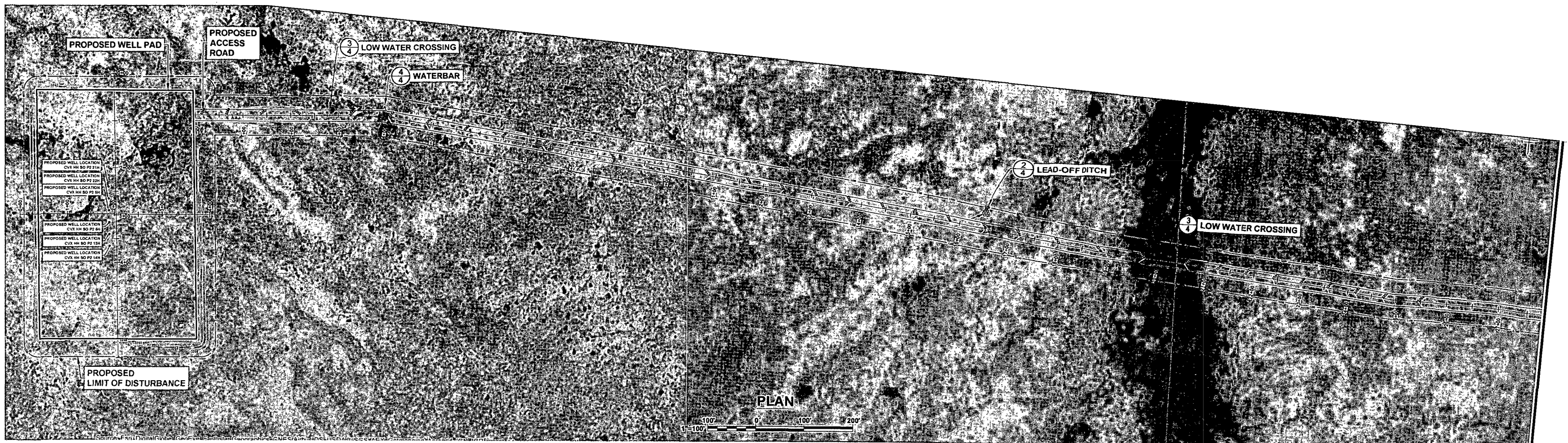
ARCADIS Design & Consultancy for natural and built assets
ARCADIS U.S., INC.

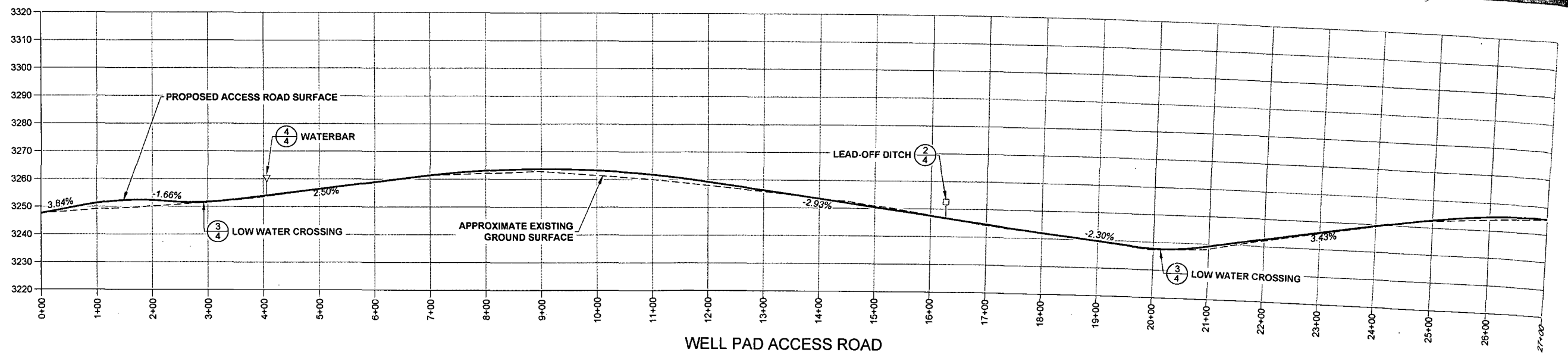
CHEVRON • EDDY COUNTY, NEW MEXICO
HH SO 08 P2

CUT-AND-FILL SITE LAYOUT AND CROSS-SECTIONS

ARCADIS Project No.: 60CHEVRO.END0
Date: MARCH 2016
ARCADIS
1004 North Big Spring Street,
Suite 300
Midland, TX
Tel. 432.687.5400

1





WELL PAD ACCESS ROAD

1"=100' 100' 0 100' 200' HORIZONTAL SCALE

1"=8' 8' 0 8' 16' VERTICAL SCALE

APPROXIMATE NET CUT VOLUME: 2,618 CY
APPROXIMATE NET FILL VOLUME: 2,590 CY
APPROXIMATE ACCESS ROAD DISTURBANCE AREA: 10.9 ACRES

XREFS:
IMAGES:
Haynurst2.tif
Pad 2.tif
Pad2_Facilities.tif
primary_BW.gif

THIS BAR MEASURES ONE [ ] USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd

Professional Engineer's Name: HUGH B. ROBOTHAM
Professional Engineer's No.: 9933

State	Date Signed	Project Mgr.
NM		NM
Designed by	Drawn by	Checked by
ALS	ALS	HBR

ARCADIS Design & Consultancy for natural and built assets
ARCADIS U.S., INC.

CHEVRON • EDDY COUNTY, NEW MEXICO
HH SO 08 P2

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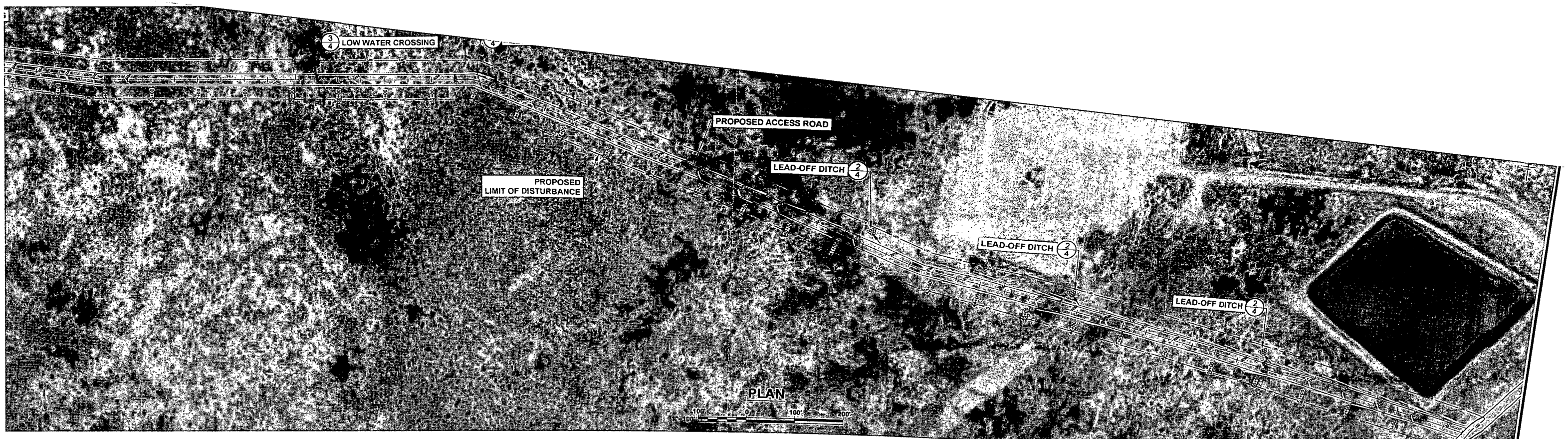
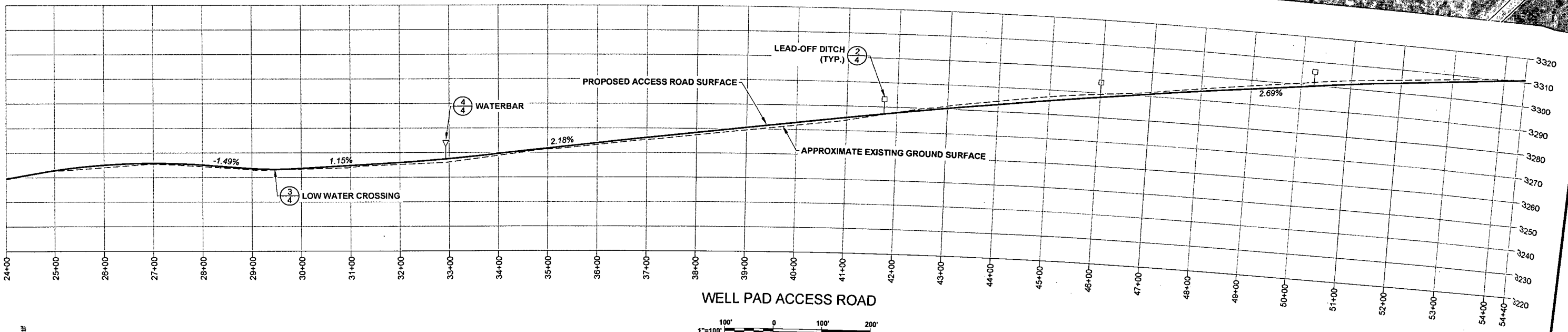
ARCADIS Project No.: 60CHEVRO.END0
Date: MARCH 2016
ARCADIS
1004 North Big Spring Street,
Suite 300
Midland, TX
Tel. 432.687.5400

2





WELL PAD ACCESS ROAD

1"=100' 100' 0 100' 200'
HORIZONTAL SCALE

1"=8' 8' 0 8' 16'
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APPROXIMATE ACCESS ROAD DISTURBANCE AREA: 10.9 ACRES

XREFS: IMAGES: Hayhurst2.tif Pad2 Aerial.tif Pad2_Facilities.tif primary_BW.gif

THIS BAR REPRESENTS ONE INCH — USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd

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Professional Engineer's No.		
9933		
State	Date Signed	Project Mgr.
NM		NM
Designed by	Drawn by	Checked by
ALS	ALS	HBR

ARCADIS | Design & Consultancy for natural and built assets

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CHEVRON • EDDY COUNTY, NEW MEXICO
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ARCADIS Project No.
60CHEVRO.ENDO

Date
MARCH 2016

ARCADIS
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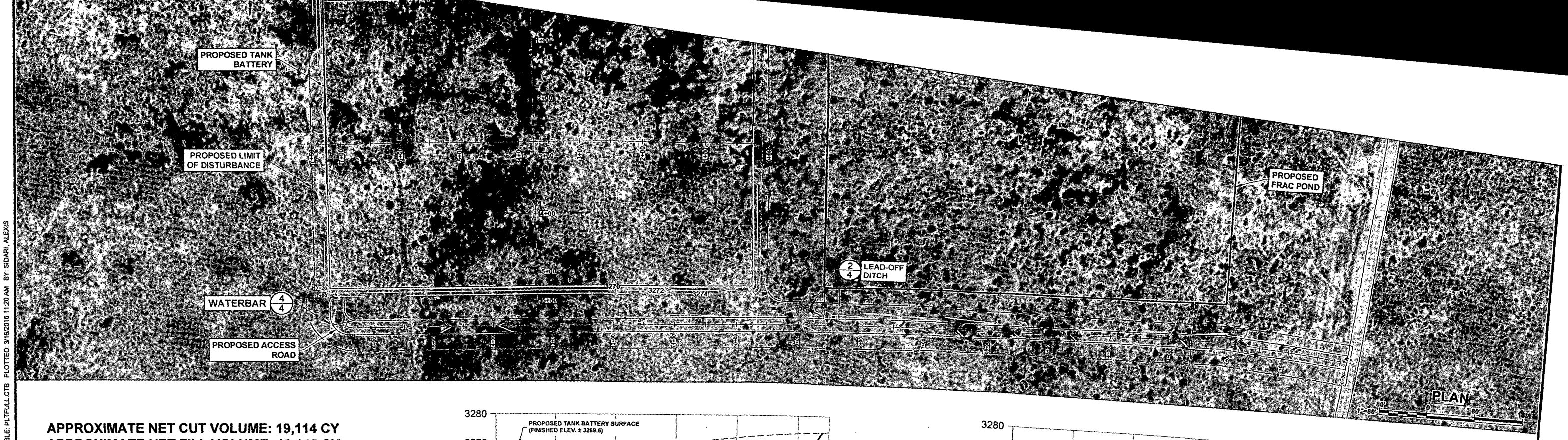
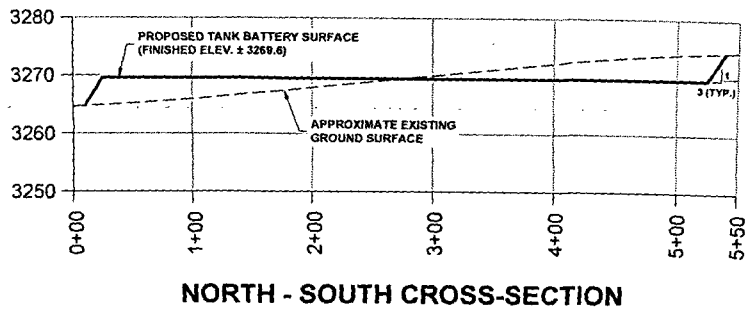
Midland, TX
Tel. 432.687.5400

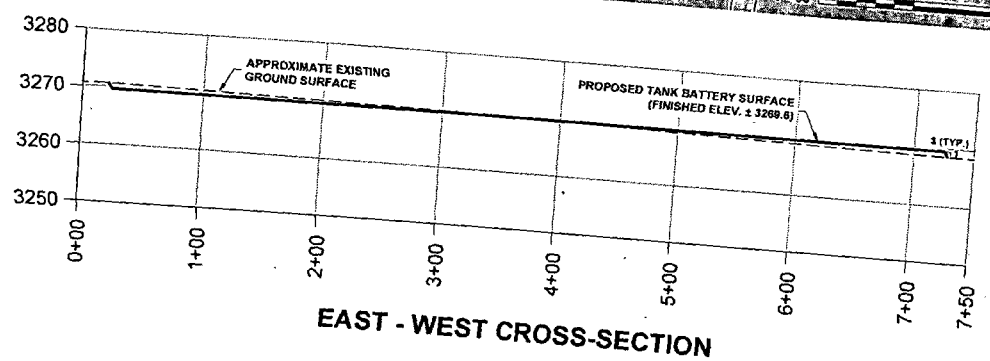
3



APPROXIMATE NET CUT VOLUME: 19,114 CY
APPROXIMATE NET FILL VOLUME: 19,145 CY
APPROXIMATE TANK BATTERY CONSTRUCTION DISTURBANCE AREA: 9.5 ACRES
ACCESS ROAD DISTURBANCE AREA: 3.0 ACRES



NORTH - SOUTH CROSS-SECTION



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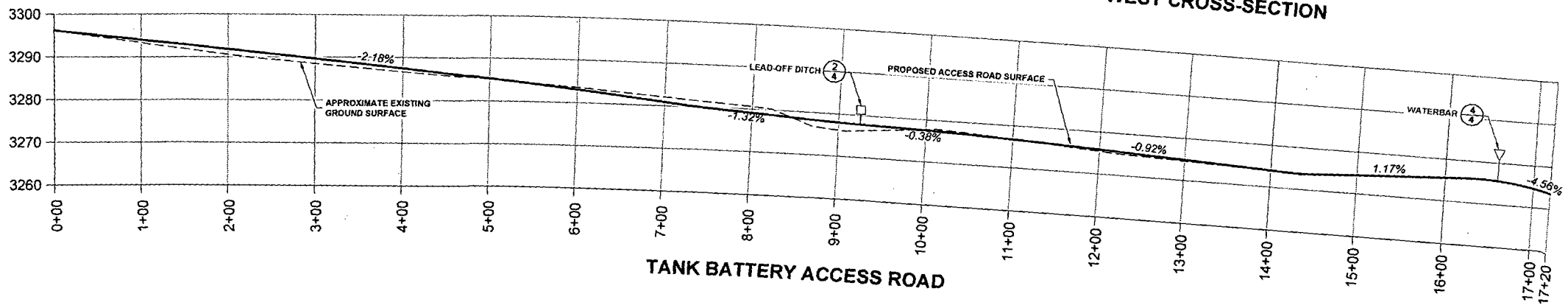

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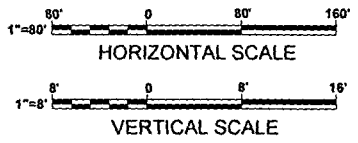

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No.	Date	Revisions	By	Ckd

...USE TO VERIFY

Professional Engineer's Name: HUGH B. ROBOTHAM		
Professional Engineer's No.: 9933		
State: NM	Date Signed:	Project Mgr.: NM
Designed by: ALS	Drawn by: ALS	Checked by: HBR

ARCADIS Design & Consultancy for natural and built assets

ARCADIS U.S., INC.

CHEVRON • EDDY COUNTY, NEW MEXICO
HH SO 08 P2

FACILITIES CUT-AND-FILL SITE LAYOUT AND CROSS-SECTIONS

ARCADIS Project No.: 60CHEVRO.END0
Date: MARCH 2016

ARCADIS
1004 North Big Spring Street,
Suite 300
Midland, TX
Tel. 432.687.5400

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Chevron USA Inc.**
LEASE NO.:	**NMNM-118108**
WELL NAME & NO.:	**HH SO 8 P2 14H**
SURFACE HOLE FOOTAGE:	**0330' FNL & 0960' FWL**
BOTTOM HOLE FOOTAGE	**0180' FNL & 0996' FWL Sec. 05, T. 26 S., R 27 E.**
LOCATION:	**Section 17, T. 26 S., R 27 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

TABLE OF CONTENTS

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

Avian Protection

Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. The holder without liability or expense shall make such modifications and/or additions to the United States.

Raptor Nest Mitigation

- A BLM Wildlife Biologist must be contacted by the operator prior to construction activities to determine if the raptor nest is active.
- Raptor nests on special, natural habitat features, such as trees, large brush, cliff faces and escarpments, will be protected by not allowing surface disturbance within up to 200 meters of nests or by delaying activity for up to 90 days, or a combination of both. Exceptions to this requirement for raptor nests will be considered if the nests expected to be disturbed are inactive, the proposed activity is of short duration (e.g. habitat enhancement projects, fences, pipelines), and will not result in continuing activity in proximity to the nest.
- Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

Visual Resource Management (VRM)

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

Cave and Karst

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

Cave/Karst Surface Mitigation

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

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

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

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

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

Tank Battery Liners and Berms:
Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Leak Detection System:
A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing

electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

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

Cave/Karst Subsurface Mitigation

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

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

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

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

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

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

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

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

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

G. ON LEASE ACCESS ROADS

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

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

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

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

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

Ditching
Ditching shall be required on both sides of the road.

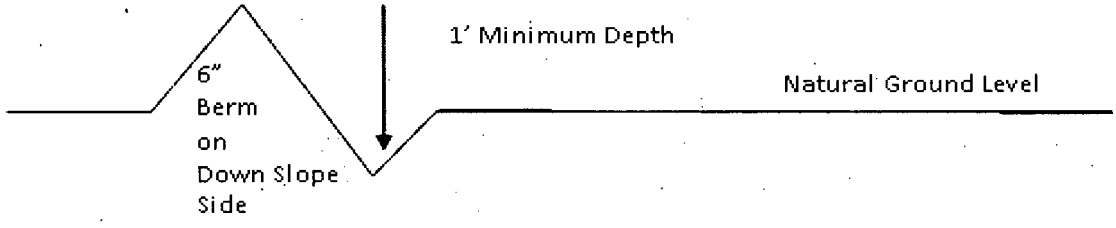
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

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

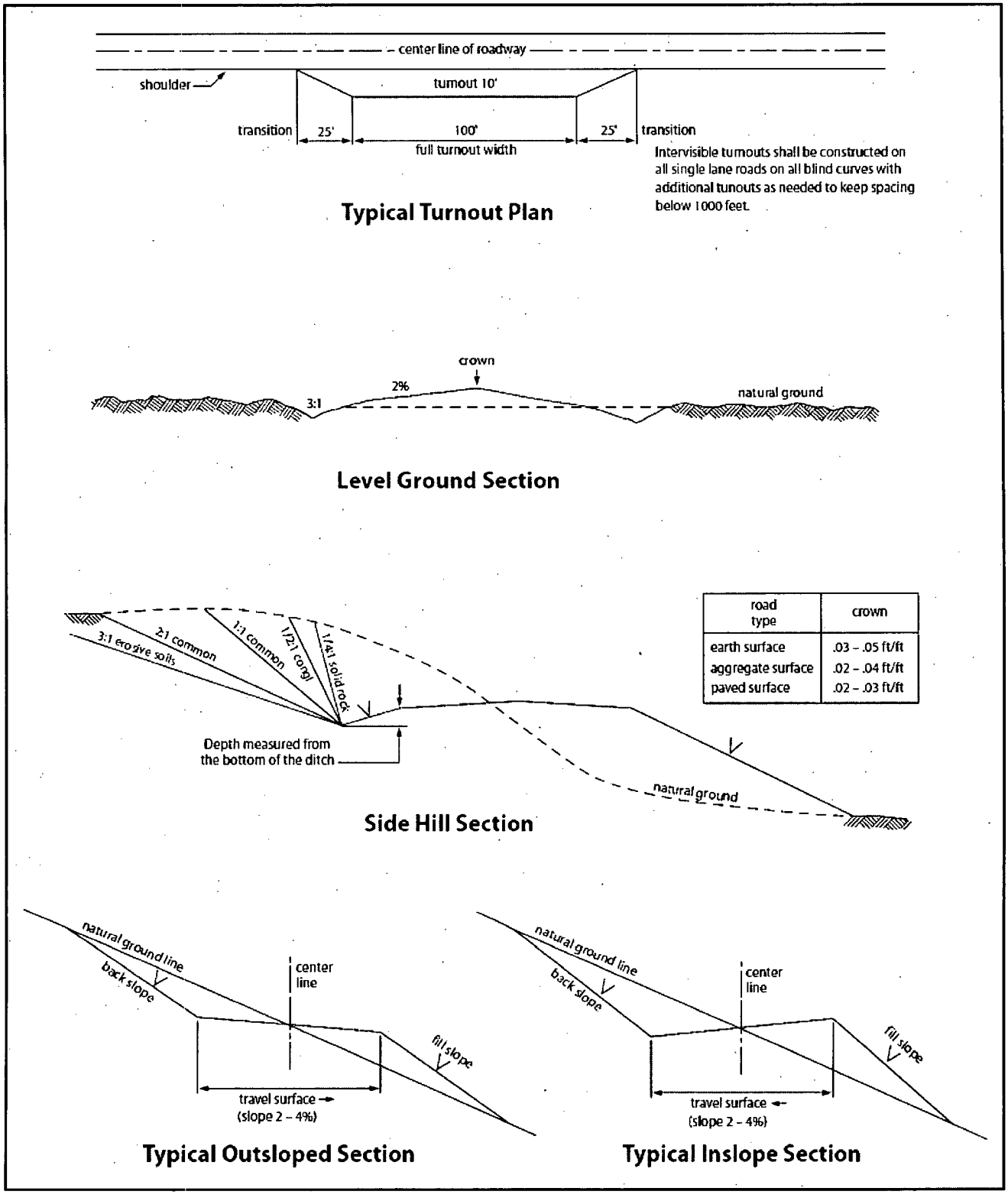


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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. **The operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other wells.**

4. 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.

5. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size 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.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

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

High Cave/Karst
Possibility of water flows in the Castillo and Salado.
Possibility of lost circulation in the Delaware.
Abnormal Pressures may be encountered when penetrating the 3rd Bone Spring Sandstone and all subsequent formations.

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

1. The **13-3/8** inch surface casing shall be set at approximately **450** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Formation below the 13-3/8" 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 and the mud weight for the bottom of the hole. Report results to BLM office.

Intermediate casing shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Operator has proposed DV tool at depth of 2100', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

a. First stage to DV tool:
☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.
b. Second stage above DV tool:
☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst. Excess calculates to 22% - Additional cement may be required.**

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

The pilot hole plugging procedure is approved as written. Note plug top on Subsequent Report sundry of drilling activities.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
   ☒ Cement as proposed by operator. 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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **10M 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.** BOP/BOPE shall be tested after nipple up according to Onshore Order #2.

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
   a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
   b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.
   c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
   d. The results of the test shall be reported to the appropriate BLM office.
   e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
   f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

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

F. WASTE MATERIAL AND FLUIDS

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

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

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VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

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

Exclosure Netting (Open-top Tanks)

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

Chemical and Fuel Secondary Containment and Exclosure Screening

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

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

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

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

B. PIPELINES

BURIED PIPELINE STIPULATIONS

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

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

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

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

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, 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. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

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

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

7. The maximum allowable disturbance for construction in this right-of-way will be **30** feet:

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

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately ___6___ inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

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

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

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

( ) seed mixture 1	( ) seed mixture 3
() seed mixture 2	(X) seed mixture 4
( ) seed mixture 2/LPC	( ) Aplomado Falcon Mixture

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

14. The pipeline will be identified by signs at the point of origin and completion of the right-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. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

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

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

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

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

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall

inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.

b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

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).

Mixture 4, for Gypsum Sites

The holder shall seed all the 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 will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

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

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

Species	lb/acre
Alkli Sacaton (*Sporobolus airoides*)	1.5
DWS~ Four-wing saltbush (*Atriplex canescens*)	8.0

~DWS: DeWinged Seed

*Pounds of pure live seed:

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