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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

APR 10 2018

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-44878	² Pool Code 98220	³ Well Name PURPLE SAGE; WOLF CAMP (GAS)
⁴ Property Code 321188	⁵ Property Name CB SO 15 22 004	⁶ Well Number 3H
⁷ OGRID No. 4323	⁸ Operator Name CHEVRON U.S.A. INC.	⁹ Elevation 3007'

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	15	23 SOUTH	28 EAST, N.M.P.M.		335'	NORTH	829'	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
N	22	23 SOUTH	28 EAST, N.M.P.M.		280'	SOUTH	2180'	WEST	EDDY

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
640			

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.

<p>PROPOSED FIRST TAKE POINT</p> <p>X= 579,387 NAD 27 Y= 477,203 LAT. 32.311686 LONG. 104.076368 X= 620,570 NAD83 Y= 477,283 LAT. 32.311807 LONG. 104.076863</p>	<p>CB SO 15 22 004 NO. 3H WELL</p> <p>X= 578,037 NAD 27 Y= 477,175 LAT. 32.311618 LONG. 104.080739 X= 619,220 NAD83 Y= 477,235 LAT. 32.311739 LONG. 104.081234 ELEVATION +3007' NAVD 88</p>		<p>¹⁷ OPERATOR CERTIFICATION</p> <p>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.</p> <p><i>[Signature]</i> 4/10/2018 Signature Date Laura Becerra Printed Name LBecerra@Chevron.com E-mail Address</p>
<p>PROPOSED MID POINT</p> <p>X= 579,413 NAD 27 Y= 472,217 LAT. 32.297979 LONG. 104.076325 X= 620,595 NAD83 Y= 472,276 LAT. 32.298099 LONG. 104.076820</p>	<p>CORNER COORDINATES TABLE (NAD 27)</p> <p>A - Y=477498.90, X=577205.98 B - Y=477585.85, X=582543.98 C - Y=472181.88, X=577232.84 D - Y=472268.72, X=582548.90 E - Y=468858.95, X=577288.92 F - Y=467012.81, X=582560.30</p>	<p>PROPOSED LAST TAKE POINT</p> <p>X= 579,465 NAD 27 Y= 467,253 LAT. 32.284332 LONG. 104.076194 X= 620,648 NAD83 Y= 467,312 LAT. 32.284453 LONG. 104.076689</p>	<p>¹⁸ SURVEYOR CERTIFICATION</p> <p>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.</p> <p>3-15-2018 Date of Survey <i>[Signature]</i> Signature and Seal of Professional Surveyor 23006 Certificate Number</p>

1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA TVD	KBTVD	MD
Castille	2276	758	
Lamar	435	2599	
Bell	398	2636	
Cherry	-430	3464	
Brushy	-1638	4672	
Bone Spring Lime	-3140	6174	
Avalon	-3179	6213	
First Bone Spring	-4113	7147	
Second Bone Spring	-4913	7947	
Third Bone Spring	-6123	9157	
Wolfcamp A	-6413	9447	
Lateral TVD Wolfcamp A	-6537		20,000'

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	758
Water	Cherry Canyon	3464
Oil/Gas	Brushy Canyon	4672
Oil/Gas	First Bone Spring	7147
Oil/Gas	Second Bone Spring	7947
Oil/Gas	Third Bone Spring	9157
Oil/Gas	Wolfcamp A	9447

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

3. BOP EQUIPMENT

Will have a minimum of a 5000 psi rig stack (see proposed schematic). Stack will be tested as specified in the attached testing requirements. Batch drilling of the surface, intermediate, and production will take place. A full BOP test will be performed unless approval from BLM is received otherwise. Flex choke hose will be used for all wells on the pad (see attached specs) BOP test will be conducted by a third party.

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

4. CASING PROGRAM

Purpose	From	To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	450'	17-1/2"	13-3/8"	54.5 #	J-55	STC	New
Intermediate	0'	9,050'	12-1/4"	9-5/8"	43.5#	L-80	LTC	New
Production	0'	20,000'	8 1/2"	5 1/2"	20.0#	P-110	TXP	New

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

Surface Casing: 450'
Intermediate Casing: 9,050'
Production Casing: 20,000' MD

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension	Min SF Tri-Axial
Surface	1.43	6.97	2.77	1.78
Intermediate	1.85	2.32	2.27	2.32
Production	1.11	1.52	2.00	1.21

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	OH %Excess	Sacks	Water
Surface				(ppg)	(sx/cu ft)	Open Hole		gal/sk
Tail	Class C	0'	450'	14.8	1.336	10	257	6.423
Intermediate								
Stage 2 Lead	Class C	0'	1,640'	11.9	2.57	10	234	14.73
Stage 2 Tail	Class C	1,640'	2,640'	14.8	1.337	10	259	6.42
DV Tool		2,640'						
Stage 1 Lead	Class C	2,640'	8,050'	11.9	2.57	10	725	14.73
Stage 1 Tail	Class C	8,050'	9,050'	14.8	1.337	10	272	6.42
Production								
Lead	Class C	0'	8,000'	11.9	2.466	0	822	14.12
Tail	Class C	8,000'	19,000'	14.8	1.341	10	2066	5.40
Acid Soluable Tail	Class H	19,000'	20,000'	15	2.189	10	115	9.57

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

6. MUD PROGRAM

From	To	Type	Weight	F. Vis	Filtrate
0'	450'	Spud Mud	8.3 - 10	32 - 34	NC - NC
450'	9,050'	OBM	8.8 - 10.4	50 - 70	5.0 - 10
9,050'	20,000'	OBM	9.5 - 13	50 - 70	5.0 - 10

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

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

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

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

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

7. TESTING, LOGGING, AND CORING

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

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

TYPE	Logs	Interval	Timing	Vendor
Mudlogs	2 man mudlog	Int Csg to TD	Drillout of Int Csg	TBD
LWD	MWD Gamma	Int CSG & Prod	While Drilling	TBD

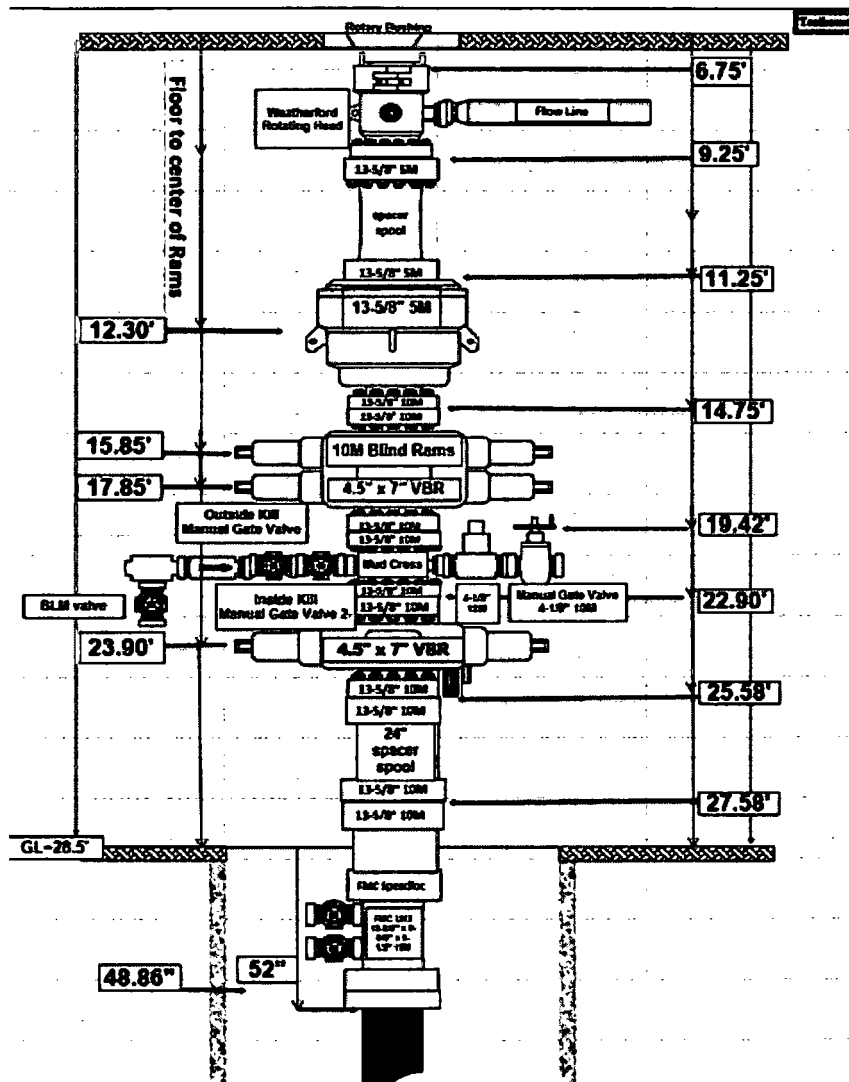
- c. Conventional whole core samples are not planned.
- d. A Directional Survey will be run.

8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

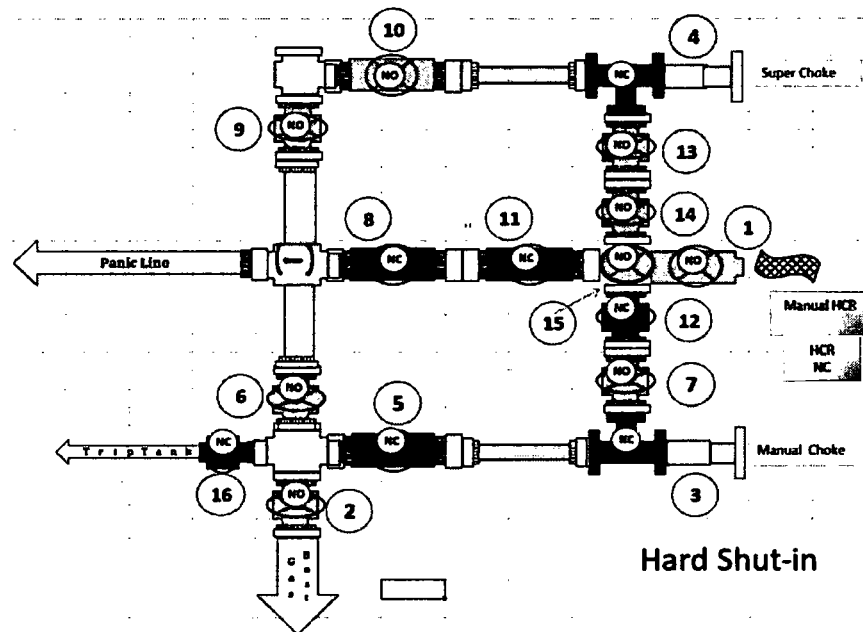
No abnormal Pressures anticipated. Reference Attached H2S Contingency Plan.

BOP Schematic

Patterson 257 Stack Layout



Choke Manifold



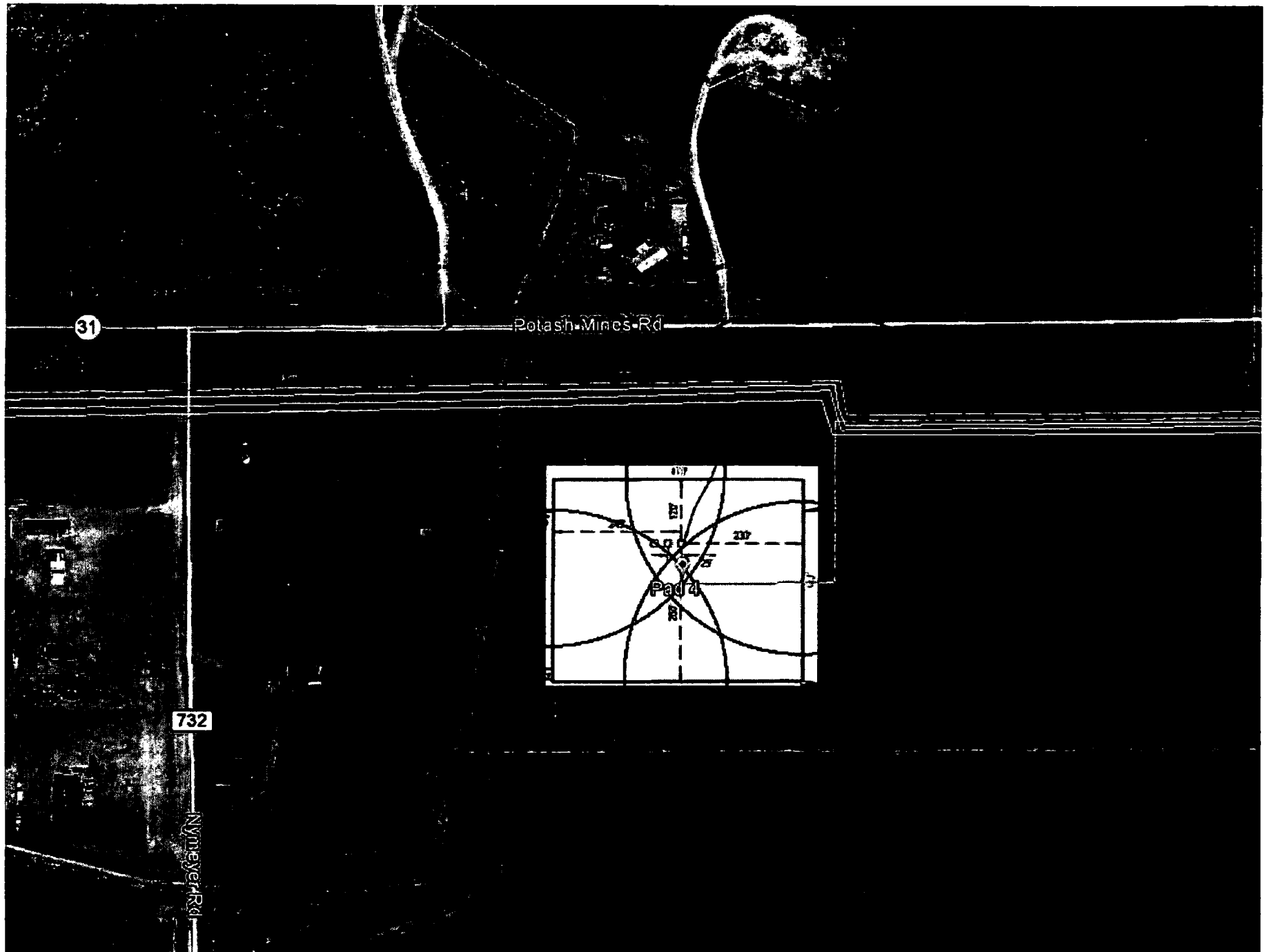


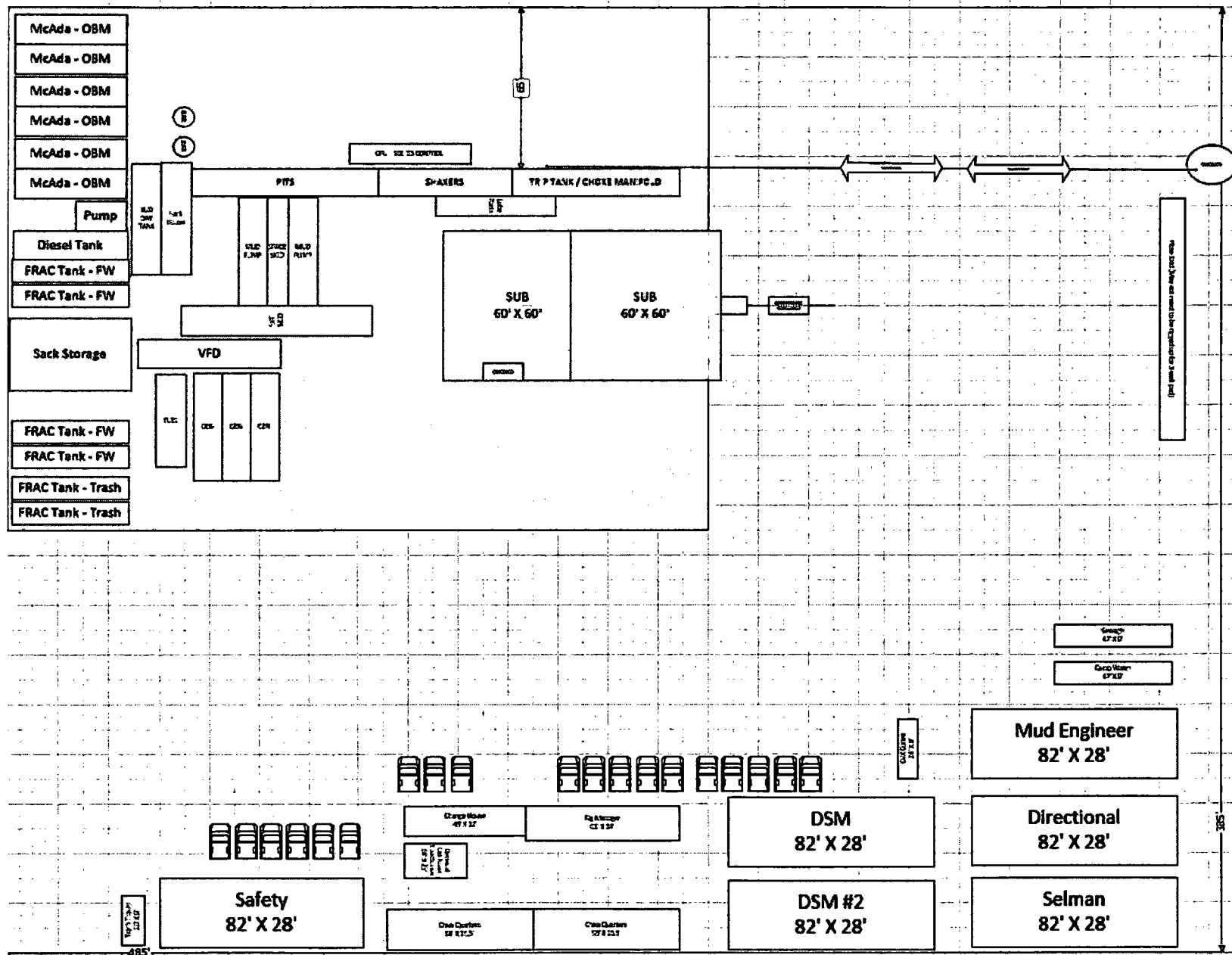
ContiTech

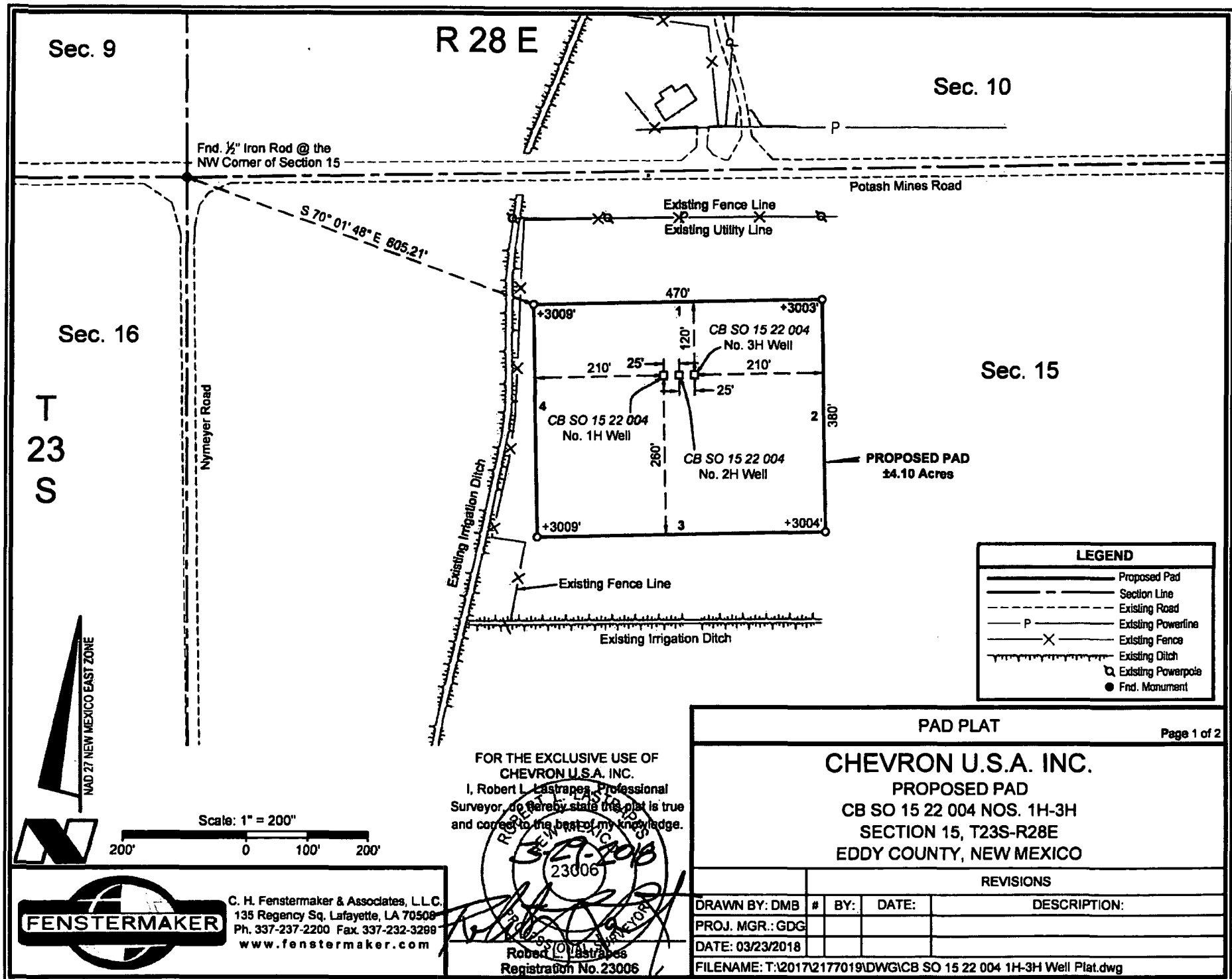
Hose Data Sheet

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

CB SO 15 22 004 – 300' Mile Radius







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.nmonccall.org

COURSE	BEARING	DISTANCE
1	N 88° 54' 02" E	470.00'
2	S 01° 05' 58" E	380.00'
3	S 88° 54' 02" W	470.00'
4	N 01° 05' 58" W	380.00'

NW PAD CORNER		NE PAD CORNER	
X=	577,775 NAD 27	X=	578,245 NAD 27
Y=	477,290	Y=	477,299
LAT.	32.311936	LAT.	32.311958
LONG.	104.081587	LONG.	104.080086
X=	618,957 NAD83	X=	619,427 NAD83
Y=	477,350	Y=	477,359
LAT.	32.312057	LAT.	32.312078
LONG.	104.082083	LONG.	104.080561
ELEVATION +3009' NAVD 88		ELEVATION +3003' NAVD 88	
SW PAD CORNER		SE PAD CORNER	
X=	577,782 NAD 27	X=	578,252 NAD 27
Y=	476,910	Y=	476,919
LAT.	32.310892	LAT.	32.310913
LONG.	104.081566	LONG.	104.080045
X=	618,965 NAD83	X=	619,435 NAD83
Y=	476,970	Y=	476,979
LAT.	32.311012	LAT.	32.311034
LONG.	104.082062	LONG.	104.080541
ELEVATION +3009' NAVD 88		ELEVATION +3004' NAVD 88	

CB SO 15 22 004 No. 1H Well	CB SO 15 22 004 No. 2H Well	CB SO 15 22 004 No. 3H Well
X= 577,987 NAD 27	X= 578,012 NAD 27	X= 578,037 NAD 27
Y= 477,174	Y= 477,175	Y= 477,175
LAT. 32.311616	LAT. 32.311617	LAT. 32.311618
LONG. 104.080901	LONG. 104.080820	LONG. 104.080739
X= 619,170 NAD83	X= 619,195 NAD83	X= 619,220 NAD83
Y= 477,234	Y= 477,234	Y= 477,235
LAT. 32.311737	LAT. 32.311738	LAT. 32.311739
LONG. 104.081396	LONG. 104.081315	LONG. 104.081234
ELEVATION +3006' NAVD 88	ELEVATION +3006' NAVD 88	ELEVATION +3007' NAVD 88



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

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

23006
3-29-2018

Robert L. Lastrapes
Registration No. 23006

PAD PLAT

Page 2 of 2

CHEVRON U.S.A. INC.
PROPOSED PAD
CB SO 15 22 004 NOS. 1H-3H
SECTION 15, T23S-R28E
EDDY COUNTY, NEW MEXICO

REVISIONS

DRAWN BY: DM8	#	BY:	DATE:	DESCRIPTION:
PROJ. MGR.: GDG				
DATE: 03/23/2018				
FILENAME: T:\2017\2177019\DWG\CB SO 15 22 004 1H-3H Well Plat.dwg				