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1220 S. St. Francis Dr., Santa Fe, NM 87505
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State of New Mexico

Form C-102

RECEIVED
JAN 09 2020
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45117	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLFCAMP (GAS)
⁴ Property Code	⁵ Property Name HH SO 8 5 FED 003	⁶ Well Number 3H
⁷ OGRID No. 4323	⁸ Operator Name CHEVRON U.S.A. INC.	⁹ Elevation 3266'

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
C	17	26 SOUTH	27 EAST, N.M.P.M.		579'	NORTH	2309'	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
C	5	26 SOUTH	27 EAST, N.M.P.M.		184'	NORTH	2409' ✓	WEST	EDDY

¹² Dedicated Acres 640	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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 FINAL LAST TAKE POINT X= 537,361' Y= 392,101' LAT. 32.077944° N LONG. 104.212709° W NAD 27 X= 578,545' Y= 392,158' LAT. 32.078065° N LONG. 104.213204° W NAD83/86 MID POINT X= 537,361' Y= 387,133' LAT. 32.064288° N LONG. 104.212729° W NAD 27 X= 578,544' Y= 387,190' LAT. 32.064409° N LONG. 104.213223° W NAD83/86 FINAL FIRST TAKE POINT X= 537,359' Y= 382,156' LAT. 32.050605° N LONG. 104.212752° W NAD 27 X= 578,543' Y= 382,213' LAT. 32.050727° N LONG. 104.213246° W NAD83/86 KICK OFF POINT X= 537,306' Y= 381,176' LAT. 32.047911° N LONG. 104.212926° W NAD 27 X= 578,490' Y= 381,233' LAT. 32.048033° N LONG. 104.213420° W NAD83/86	ACTUAL BOTTOM HOLE LOCATION X= 537,363' Y= 392,262' LAT. 32.078386° N LONG. 104.212702° W NAD 27 X= 578,547' Y= 392,319' LAT. 32.078507° N LONG. 104.213197° W NAD83/86 CORNER COORDINATES TABLE (NAD 27) A - Y=392442.33, X=534954.83 B - Y=392446.14, X=537606.87 C - Y=387143.09, X=534935.36 D - Y=387132.57, X=537574.14 E - Y=381810.94, X=534988.20 F - Y=381805.09, X=537646.07 G - Y=376480.27, X=535066.16 H - Y=376477.58, X=537710.13 HH SO 8 5 FED 003 3H WELL X= 537,306' Y= 381,227' LAT. 32.048050° N LONG. 104.212927° W NAD 27 X= 578,490' Y= 381,284' LAT. 32.048172° N LONG. 104.213421° W NAD83/86 ELEVATION +3266' NAVD 88	2409' 184' Final Last Take Point @ 20,264' MD 344.89' FNL, 2407.53' FWL 243.62' FEL Lease Sec. 5 Mid Point @ 15,294.89' MD Sec. 8 Final First Take Point @ 10,312' MD 350.41' FSL, 2374.18' FWL 282.23' FEL Lease Kick Off Point @ 8,900' MD 629.73' FNL, 2308.53' FWL Sec. 17 2309' 579'	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. Kayla McConnell 1/6/2020 Signature Date Kayla McConnell Printed Name gncv@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. 04/07/2017 Date of Survey Signature and Seal of Professional Surveyor: ROBERT L. LASTRAPES NEW MEXICO 23006 12/18/2019 Certificate Number
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Rev. 12-20

RECEIVED

JAN 09 2020

Intent ☐ As Drilled ☒API #
30-015-45117

EMNRD-OCD ARTESIA

Operator Name: CHEVRON USA INC	Property Name: HH SO 10 15 FED 003	Well Number 3H
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Kick Off Point (KOP)

UL C	Section 17	Township 26S	Range 27E	Lot	Feet 629	From N/S N	Feet 2308	From E/W W	County EDDY
Latitude 32.048033					Longitude -104.213420			NAD 83	

First Take Point (FTP)

UL N	Section 8	Township 26S	Range 27E	Lot	Feet 350	From N/S S	Feet 2374	From E/W W	County EDDY
Latitude 32.050727					Longitude -104.213246			NAD 83	

Last Take Point (LTP)

UL C	Section 5	Township 26S	Range 27E	Lot	Feet 344	From N/S N	Feet 2407	From E/W W	County EDDY
Latitude 32.078065					Longitude -104.213204			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit?

NO

Is this well an infill well?

YES

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API # 30-015-45115	Operator Name: CHEVRON USA INC	Property Name: HH SO 8 5 FED 003	Well Number 1H
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KZ 06/29/2018

Certification of Ownership

I have reviewed the ownership of the oil and gas leasehold (Federal Oil and Gas Lease NMNM 118108, 100549, and NMNM 113399) governing Section 5, 8, 17, and 20, T26S-R28E, Eddy County, New Mexico, for purposes of identifying an "area of common ownership" as set forth in NMAC 19.15.16.15.B(6) and C(7). As of the date below, the ownership in the above-described lease and lands is identical ownership as defined in NMAC 19.15.12.7.B.

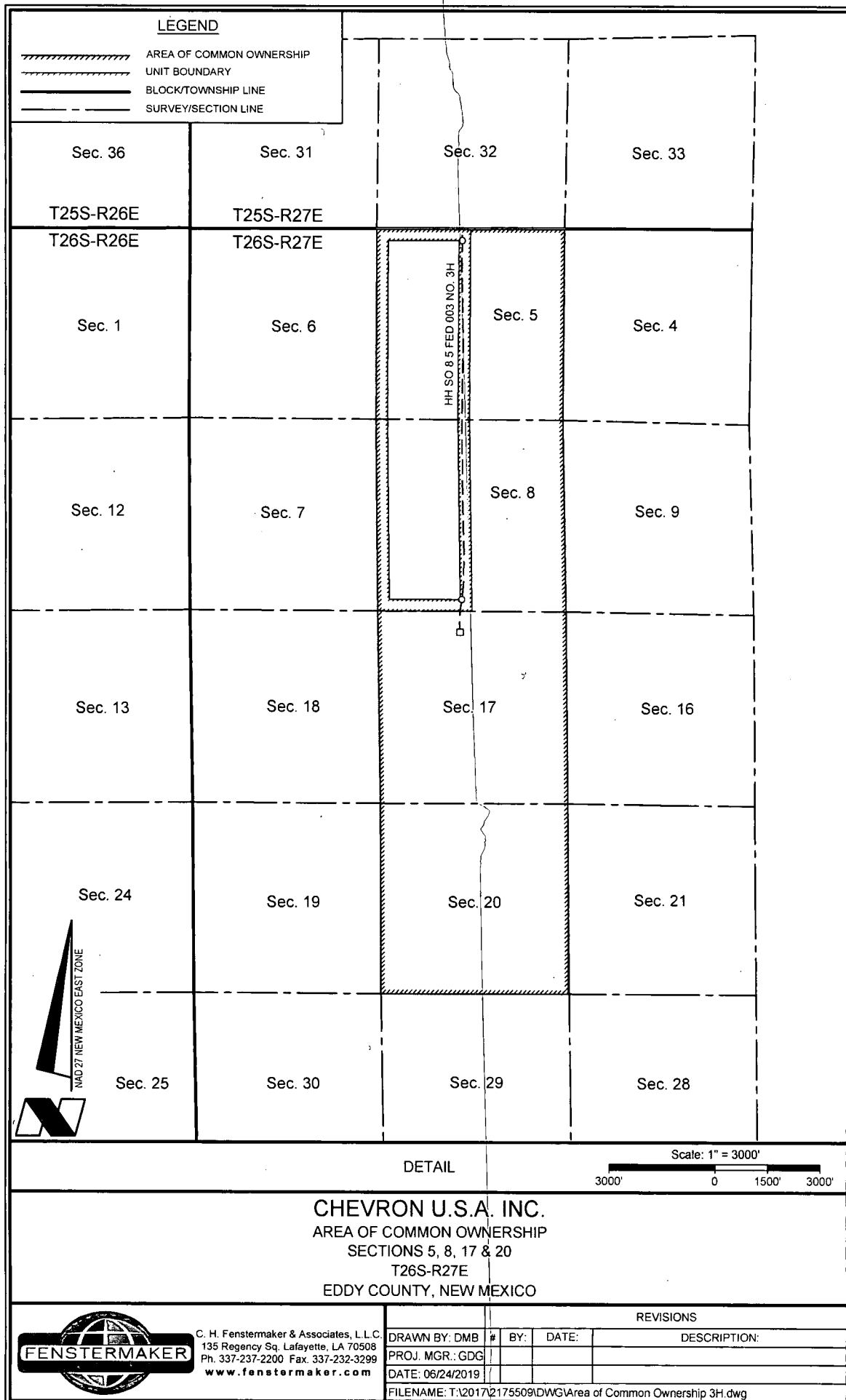
Chevron U.S.A. Inc.



Christopher Cooper
Land Representative

June 10, 2019

A Certified Directional Survey
requested as required by NMOC
Rule 19.15.16.14 NMAC



Chevron HH SO 8 5 FED 003 No. 3H ST01 MWD to 20425ft Survey Geodetic

Report
(Def Survey)

Report Date: June 18, 2019 - 09:30 AM
 Client: Chevron
 Field: NM Eddy County (NAD 27)
 Structure / Slot: Chevron HH SO 8 5 FED 003 No. 3H / Chevron HH SO 8 5 FED 003 No. 3H
 Well: Chevron HH SO 8 5 FED 003 No. 3H
 Borehole: ST01
 UWI / API#: Unknown / Unknown
 Survey Name: Chevron HH SO 8 5 FED 003 No. 3H ST01 MWD to 20425ft
 Survey Date: June 18, 2019
 Tort / AHD / DDI / ERD Ratio: 299.134' / 11202.810 ft / 6.849' / 1.157
 Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 2' 52.98270", W 104° 12' 46.53554"
 Location Grid N/E Y/X: N 381227.000 NUS, E 537306.000 NUS
 CRS Grid Convergence Angle: 0.0639 °
 Grid Scale Factor: 0.99991068
 Version / Patch: 2.10.760.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 359.825 ° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB = 28ft
 TVD Reference Elevation: 3294.000 ft above MSL
 Seabed / Ground Elevation: 3266.000 ft above MSL
 Magnetic Declination: 7.220 °
 Total Gravity Field Strength: 998.4290mgn (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 47766.188 nT
 Magnetic Dip Angle: 59.654 °
 Declination Date: June 18, 2019
 Magnetic Declination Model: HDGM 2019
 North Reference: Grid North
 Grid Convergence Used: 0.0639 °
 Total Corr Mag North->Grid North: 7.1561 °
 Local Coord Reference To: Well Head

A Certified Directional Survey
 requested as required by NMOC
 Rule 19.15.16.14 NMAC

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (NUS)	Easting (ftUS)	Latitude (N/S ° ° °)	Longitude (E/W ° ° °)
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	381227.00	537306.00	N 32° 2' 52.98"	W 104° 12' 46.54"
First 3rd Party Survey	193.00	1.30	284.50	192.88	0.55	0.55	-2.12	0.67	381227.55	537303.88	N 32° 2' 52.99"	W 104° 12' 46.56"
	282.00	0.60	322.80	281.87	1.18	1.17	-3.38	1.02	381228.17	537302.62	N 32° 2' 52.99"	W 104° 12' 46.57"
Last 3rd Party Survey	372.00	1.30	278.70	371.96	1.72	1.70	-4.67	1.07	381228.70	537301.33	N 32° 2' 53.00"	W 104° 12' 46.59"
First SLB MWD Survey	447.00	1.20	280.90	446.94	2.00	1.98	-6.29	0.15	381228.98	537299.72	N 32° 2' 53.00"	W 104° 12' 46.61"
	594.00	1.19	160.40	593.93	0.85	0.83	-7.28	1.41	381227.83	537298.72	N 32° 2' 52.99"	W 104° 12' 46.62"
	686.00	1.00	170.44	685.91	-0.84	-0.86	-6.83	0.29	381226.14	537299.17	N 32° 2' 52.97"	W 104° 12' 46.61"
	780.00	0.71	189.38	779.90	-2.22	-2.24	-6.79	0.43	381224.76	537299.21	N 32° 2' 52.96"	W 104° 12' 46.61"
	872.00	0.66	203.81	871.89	-3.27	-3.29	-7.10	0.19	381223.71	537298.90	N 32° 2' 52.95"	W 104° 12' 46.62"
	967.00	0.44	219.12	966.89	-4.05	-4.07	-7.55	0.28	381222.93	537298.45	N 32° 2' 52.94"	W 104° 12' 46.62"
	1062.00	0.43	271.61	1061.89	-4.32	-4.35	-8.13	0.41	381222.65	537297.87	N 32° 2' 52.94"	W 104° 12' 46.63"
	1156.00	0.59	286.89	1155.88	-4.17	-4.20	-8.95	0.22	381222.80	537297.05	N 32° 2' 52.94"	W 104° 12' 46.64"
	1251.00	0.56	325.71	1250.88	-3.64	-3.67	-9.68	0.40	381223.33	537296.32	N 32° 2' 52.95"	W 104° 12' 46.65"
	1345.00	0.58	6.02	1344.87	-2.79	-2.82	-9.89	0.42	381224.18	537296.11	N 32° 2' 52.95"	W 104° 12' 46.65"
	1440.00	0.68	66.44	1439.87	-2.09	-2.11	-9.32	0.67	381224.89	537296.68	N 32° 2' 52.96"	W 104° 12' 46.64"
	1534.00	0.97	79.68	1533.86	-1.72	-1.75	-8.03	0.37	381225.25	537297.97	N 32° 2' 52.97"	W 104° 12' 46.63"
	1628.00	0.88	54.49	1627.85	-1.17	-1.19	-6.66	0.44	381225.81	537299.34	N 32° 2' 52.97"	W 104° 12' 46.61"
	1723.00	1.40	49.01	1722.83	0.01	0.00	-5.19	0.56	381227.00	537300.81	N 32° 2' 52.98"	W 104° 12' 46.60"
	1817.00	2.15	59.44	1816.78	1.66	1.65	-2.80	0.87	381228.65	537303.20	N 32° 2' 53.00"	W 104° 12' 46.57"
	1911.00	1.20	78.84	1910.74	2.74	2.73	-0.32	1.16	381229.73	537305.68	N 32° 2' 53.01"	W 104° 12' 46.54"
	2006.00	0.83	101.72	2005.73	2.78	2.79	1.33	0.57	381229.79	537307.33	N 32° 2' 53.01"	W 104° 12' 46.52"
	2100.00	0.90	92.13	2099.72	2.61	2.62	2.74	0.17	381229.62	537308.74	N 32° 2' 53.01"	W 104° 12' 46.50"
	2290.00	0.53	62.04	2289.70	2.96	2.98	5.00	0.27	381229.98	537311.00	N 32° 2' 53.01"	W 104° 12' 46.48"
	2479.00	0.35	31.60	2478.70	3.86	3.88	6.08	0.15	381230.88	537312.08	N 32° 2' 53.02"	W 104° 12' 46.46"
	2573.00	0.45	70.52	2572.69	4.23	4.25	6.58	0.30	381231.25	537312.58	N 32° 2' 53.02"	W 104° 12' 46.46"
	2762.00	0.28	61.17	2761.69	4.69	4.72	7.68	0.10	381231.72	537313.68	N 32° 2' 53.03"	W 104° 12' 46.45"
	2856.00	0.17	95.77	2855.69	4.79	4.81	8.02	0.18	381231.81	537314.02	N 32° 2' 53.03"	W 104° 12' 46.44"
	2951.00	0.11	42.06	2950.69	4.84	4.87	8.22	0.14	381231.87	537314.22	N 32° 2' 53.03"	W 104° 12' 46.44"
	3046.00	0.18	300.38	3045.69	4.99	5.01	8.15	0.24	381232.01	537314.15	N 32° 2' 53.03"	W 104° 12' 46.44"
	3140.00	0.20	282.57	3139.69	5.10	5.12	7.87	0.07	381232.12	537313.87	N 32° 2' 53.03"	W 104° 12' 46.44"
	3235.00	0.08	269.15	3234.69	5.13	5.16	7.64	0.13	381232.16	537313.64	N 32° 2' 53.03"	W 104° 12' 46.45"
	3329.00	0.08	250.56	3328.69	5.11	5.13	7.51	0.03	381232.13	537313.51	N 32° 2' 53.03"	W 104° 12' 46.45"
	3423.00	0.22	122.04	3422.69	4.99	5.02	7.60	0.29	381232.02	537313.60	N 32° 2' 53.03"	W 104° 12' 46.45"
	3518.00	0.13	170.59	3517.69	4.79	4.81	7.78	0.17	381231.81	537313.77	N 32° 2' 53.03"	W 104° 12' 46.45"
	3612.00	0.17	69.83	3611.69	4.73	4.76	7.92	0.25	381231.76	537313.92	N 32° 2' 53.03"	W 104° 12' 46.44"
	3707.00	0.11	213.66	3706.69	4.70	4.73	8.01	0.28	381231.73	537314.00	N 32° 2' 53.03"	W 104° 12' 46.44"
	3801.00	0.17	330.61	3800.69	4.75	4.78	7.89	0.26	381231.77	537313.89	N 32° 2' 53.03"	W 104° 12' 46.44"
	3896.00	0.11	114.45	3895.69	4.84	4.86	7.90	0.28	381231.86	537313.90	N 32° 2' 53.03"	W 104° 12' 46.44"
	3990.00	0.11	298.36	3989.69	4.84	4.87	7.90	0.23	381231.87	537313.90	N 32° 2' 53.03"	W 104° 12' 46.44"
	4085.00	0.22	148.05	4084.69	4.73	4.75	7.92	0.34	381231.75	537313.92	N 32° 2' 53.03"	W 104° 12' 46.44"
	4179.00	0.29	84.24	4178.69	4.60	4.62	8.25	0.29	381231.62	537314.25	N 32° 2' 53.03"	W 104° 12' 46.44"
	4273.00	0.20	74.86	4272.68	4.67	4.69	8.65	0.10	381231.69	537314.65	N 32° 2' 53.03"	W 104° 12' 46.44"
	4368.00	0.23	94.04	4367.68	4.69	4.72	9.00	0.08	381231.72	537315.00	N 32° 2' 53.03"	W 104° 12' 46.43"
	4462.00	0.18	70.14	4461.68	4.73	4.76	9.32	0.10	381231.76	537315.32	N 32° 2' 53.03"	W 104° 12' 46.43"
	4557.00	0.13	235.01	4556.68	4.72	4.75	9.38	0.32	381231.75	537315.38	N 32° 2' 53.03"	W 104° 12' 46.43"
	4651.00	0.11	254.24	4650.68	4.63	4.66	9.20	0.05	381231.86	537315.20	N 32° 2' 53.03"	W 104° 12' 46.43"
	4841.00	0.06	311.69	4840.68	4.65	4.68	8.95	0.05	381231.68	537314.95	N 32° 2' 53.03"	W 104° 12' 46.43"
	5030.00	0.25	74.22	5029.68	4.83	4.86	9.28	0.15	381231.86	537315.27	N 32° 2' 53.03"	W 104° 12' 46.43"
	5125.00	0.24	118.28	5124.68	4.79	4.82	9.65	0.19	381231.82	537315.65	N 32° 2' 53.03"	W 104° 12' 46.42"
	5219.00	0.25	177.30	5218.68	4.49	4.52	9.83	0.26	381231.52	537315.83	N 32° 2' 53.03"	W 104° 12' 46.42"
	5313.00	0.30	182.62	5312.68	4.04	4.07	9.83	0.06	381231.07	537315.83	N 32° 2' 53.02"	W 104° 12' 46.42"
	5408.00	0.28	209.80	5407.68	3.59	3.62	9.70	0.14	381230.62	537315.70	N 32° 2' 53.02"	W 104° 12' 46.42"
	5503.00	0.11	222.84	5502.68	3.32	3.35	9.53	0.18	381230.35	537315.53	N 32° 2' 53.02"	W 104° 12' 46.42"
	5597.00	0.11	180.04	5596.68	3.17	3.19	9.47	0.09	381230.19	537315.46	N 32° 2' 53.01"	W 104° 12' 46.43"
	5692.00	0.16	241.81	5691.68	3.01	3.04	9.35	0.15	381230.04	537315.35	N 32° 2' 53.01"	W 104° 12' 46.43"
	5882.00	0.50	218.10	5881.67	2.24	2.26	8.80	0.19	381229.26	537314.60	N 32° 2' 53.00"	W 104° 12' 46.44"
	5976.00	0.56	254.50	5975.67	1.79	1.82	7.91	0.36	381228.82	537313.91	N 32° 2' 53.00"	W 104° 12' 46.44"
	6070.00	0.73	249.50	6069.66	1.46	1.49	6.90	0.19	381228.49	537312.90	N 32° 2' 53.00"	W 104° 12' 46.46"
	6165.00	1.08	212.42	6164.65	0.50	0.52	5.86	0.70	381227.52	537311.86	N 32° 2' 52.99"	W 104° 12' 46.47"
	6259.00	1.48	192.07	6258.63	-1.43	-1.42	5.13	0.64	381225.58	537311.13	N 32° 2' 52.97"	W 104° 12' 46.48"
	6354.00	1.79	196.79	6353.59	-4.05	-4.04	4.44	0.36	381222.96	537310.44	N 32° 2' 52.94"	W 104° 12' 46.48"
	6447.00	1.74	196.36	6446.55	-6.79	-6.78	3.63	0.06	381220.22	537309.63	N 32° 2' 52.92"	W 104° 12' 46.49"
	6542.00	1.41	195.67	6541.51	-9.30	-9.29	2.90	0.35	381217.71	537308.90	N 32° 2' 52.89"	W 104° 12' 46.50"
	6732.00	0.83	200.41	6731.47	-12.84	-12.83	1.79	0.31	381214.17	537307.79	N 32° 2' 52.86"	W 104° 12' 46.51"
	6827.00	0.83	219.46	6826.46	-14.01	-14.01	1.12	0.29	381212.99	537307.12	N 32° 2' 52.84"	W 104° 12' 46.52"
	6921.00	0.76	210.64	6920.46	-15.07	-15.07	0.37	0.15	381211.93	537306.37	N 32° 2' 52.83"	W 104° 12' 46.53"
	7016.00	0.68	217.84	7015.45	-16.06	-16.06	-0.30	0.13	381210.94	537305.70	N 32° 2' 52.82"	W 104° 12' 46.54"
	7111.00	0.34	225.21	7110.44	-16.70	-16.70	-0.85	0.36	381210.30	537305.15	N 32° 2' 52.82"	W 104° 12' 46.55"
	7205.00	0.00	235.25	7204.44	-16.89	-16.90	-1.05	0.36	381210.10	537304.95	N 32° 2' 52.82"	W 104° 12' 46.55"
	7300.00	0.29	198.28	7299.44	-17.12	-17.13	-1.12	0.31	381209.88	537304.88	N 32° 2' 52.81"	W 104° 12' 46.55"
	7394.00	0.71	168.86	7393.44	-17.92	-17.92	-1.08	0.51	381209.08	537304.92	N 32° 2' 52.81"	W 104° 12' 46.55"
	7489.00	1.30	147.60	7488.42	-19.41	-19.41	-0.39	0.72	381207.59	537305.61	N 32	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	8344.00	1.13	217.59	8342.99	-42.71	42.69	7.01	0.23	381184.32	537313.01	N 32 2 52.56	W 104 12 46.45
	8439.00	1.10	221.21	8437.97	-44.13	44.12	5.84	0.08	381182.89	537311.84	N 32 2 52.55	W 104 12 46.47
	8534.00	0.99	217.36	8532.96	-45.47	45.45	4.74	0.14	381181.55	537310.74	N 32 2 52.53	W 104 12 46.48
	8628.00	1.05	213.85	8626.94	-46.83	46.82	3.77	0.09	381180.19	537309.77	N 32 2 52.52	W 104 12 46.49
	8723.00	1.21	222.72	8721.92	-48.28	48.28	2.60	0.25	381178.73	537308.60	N 32 2 52.50	W 104 12 46.51
	8817.00	1.50	219.53	8815.90	-49.96	49.95	1.15	0.32	381177.05	537307.15	N 32 2 52.49	W 104 12 46.52
	8911.00	0.30	244.52	8909.88	-51.01	51.01	0.14	1.31	381176.00	537306.14	N 32 2 52.48	W 104 12 46.53
	8958.00	2.87	11.34	8956.87	-49.91	49.91	0.26	6.51	381177.10	537306.26	N 32 2 52.49	W 104 12 46.53
	9006.00	6.11	7.02	9004.71	-46.20	46.19	0.81	6.78	381180.81	537306.81	N 32 2 52.53	W 104 12 46.53
	9053.00	9.57	5.80	9051.27	-39.83	39.82	1.51	7.37	381187.18	537307.51	N 32 2 52.59	W 104 12 46.52
	9107.00	13.17	3.17	9104.20	-29.22	29.21	2.31	6.73	381197.79	537308.31	N 32 2 52.69	W 104 12 46.51
	9154.00	20.18	359.27	9149.19	-15.75	15.74	2.50	15.10	381211.26	537308.50	N 32 2 52.83	W 104 12 46.51
	9202.00	25.11	358.86	9193.48	2.73	2.73	2.19	10.28	381229.73	537308.19	N 32 2 53.01	W 104 12 46.51
	9249.00	28.07	355.43	9235.51	23.73	23.73	1.11	7.09	381250.73	537307.11	N 32 2 53.22	W 104 12 46.52
	9296.00	32.86	353.53	9276.01	47.44	47.44	-1.21	10.39	381274.43	537304.79	N 32 2 53.45	W 104 12 46.55
	9343.00	35.68	355.40	9314.84	73.79	73.78	-3.74	6.40	381300.77	537302.26	N 32 2 53.71	W 104 12 46.58
	9391.00	39.59	358.90	9352.85	103.05	103.04	-5.16	9.28	381330.03	537300.84	N 32 2 54.00	W 104 12 46.59
	9438.00	42.26	359.49	9388.36	133.83	133.82	-5.59	5.74	381360.81	537300.41	N 32 2 54.31	W 104 12 46.60
	9486.00	45.02	358.19	9423.10	166.95	166.93	-6.27	6.05	381393.92	537299.73	N 32 2 54.63	W 104 12 46.61
	9533.00	50.10	358.47	9454.80	201.61	201.59	-7.28	10.82	381428.57	537298.72	N 32 2 54.98	W 104 12 46.62
	9580.00	53.09	356.71	9484.00	238.41	238.38	-8.84	7.01	381465.36	537297.16	N 32 2 55.34	W 104 12 46.64
	9627.00	54.98	358.26	9511.60	276.41	276.38	-10.50	4.83	381503.36	537295.50	N 32 2 55.72	W 104 12 46.65
	9675.00	58.44	1.73	9537.95	316.52	316.49	-10.48	9.40	381543.46	537295.52	N 32 2 56.11	W 104 12 46.65
	9722.00	64.71	4.24	9560.31	357.77	357.74	-8.30	14.14	381584.71	537297.70	N 32 2 56.52	W 104 12 46.63
	9770.00	68.78	4.27	9579.26	401.73	401.71	-5.03	8.48	381628.67	537300.97	N 32 2 56.86	W 104 12 46.59
	9817.00	71.58	3.42	9595.19	445.83	445.82	-2.07	6.20	381672.78	537303.93	N 32 2 57.39	W 104 12 46.55
	9864.00	74.97	2.94	9608.72	490.76	490.76	0.43	7.28	381717.71	537306.43	N 32 2 57.84	W 104 12 46.52
	9911.00	79.28	2.65	9619.19	536.50	536.51	2.66	9.19	381763.46	537308.66	N 32 2 58.29	W 104 12 46.50
	9959.00	82.58	4.73	9626.76	583.78	583.80	5.71	8.10	381810.75	537311.71	N 32 2 58.76	W 104 12 46.46
	10006.00	83.54	8.06	9632.44	630.13	630.16	10.91	7.32	381857.10	537316.91	N 32 2 59.22	W 104 12 46.40
	10118.00	77.47	8.20	9650.90	739.38	739.47	26.52	5.42	381966.40	537323.52	N 32 3 0.30	W 104 12 46.22
	10150.00	76.96	7.87	9657.98	770.27	770.37	30.89	1.88	381997.30	537336.88	N 32 3 0.61	W 104 12 46.17
	10197.00	80.03	7.83	9667.36	815.87	815.99	37.18	6.53	382042.91	537343.17	N 32 3 1.06	W 104 12 46.09
	10245.00	83.04	8.12	9674.42	862.86	863.00	43.76	6.30	382089.92	537349.76	N 32 3 1.52	W 104 12 46.02
	10284.00	86.07	8.48	9678.12	901.26	901.41	49.37	7.82	382128.33	537355.36	N 32 3 1.90	W 104 12 45.95
	10292.00	86.32	8.30	9678.65	909.15	909.31	50.53	3.87	382136.22	537356.53	N 32 3 1.98	W 104 12 45.94
	10381.00	89.16	6.35	9682.16	997.31	997.50	61.87	3.87	382224.41	537367.86	N 32 3 2.85	W 104 12 45.80
	10476.00	90.95	6.42	9682.07	1091.68	1091.91	72.43	1.89	382318.81	537378.43	N 32 3 3.79	W 104 12 45.68
	10570.00	92.92	6.48	9678.89	1184.99	1185.25	82.99	2.10	382412.14	537388.98	N 32 3 4.71	W 104 12 45.56
	10665.00	93.48	5.99	9673.59	1279.25	1279.54	93.29	0.78	382506.43	537399.28	N 32 3 5.64	W 104 12 45.44
	10760.00	93.42	5.57	9667.87	1373.57	1373.89	102.84	0.45	382600.76	537408.83	N 32 3 6.58	W 104 12 45.32
	10854.00	94.32	357.69	9661.52	1467.23	1467.56	105.51	8.42	382694.43	537411.50	N 32 3 7.50	W 104 12 45.29
	10949.00	90.45	0.33	9657.57	1562.11	1562.44	103.87	4.93	382789.30	537409.86	N 32 3 8.44	W 104 12 45.31
	11043.00	91.57	1.44	9655.91	1656.08	1656.41	105.32	1.68	382883.26	537411.31	N 32 3 9.37	W 104 12 45.29
	11138.00	88.82	0.69	9655.59	1751.05	1751.38	107.09	3.00	382978.22	537413.08	N 32 3 10.31	W 104 12 45.27
	11232.00	90.78	2.14	9655.91	1845.00	1845.35	109.41	2.59	383072.18	537415.40	N 32 3 11.24	W 104 12 45.24
	11326.00	88.54	357.59	9656.47	1938.97	1939.31	109.19	5.39	383166.14	537415.18	N 32 3 12.17	W 104 12 45.24
	11421.00	89.33	1.30	9658.24	2033.93	2034.28	108.27	3.99	383261.09	537414.26	N 32 3 13.11	W 104 12 45.25
	11516.00	91.46	0.77	9657.58	2128.91	2129.25	109.98	2.31	383356.06	537415.97	N 32 3 14.05	W 104 12 45.23
	11610.00	91.12	359.59	9655.47	2222.88	2223.23	110.28	1.31	383450.02	537416.27	N 32 3 14.98	W 104 12 45.23
	11705.00	91.40	358.06	9653.38	2317.84	2318.18	108.33	1.64	383544.97	537414.32	N 32 3 15.92	W 104 12 45.25
	11799.00	90.50	358.58	9651.82	2411.79	2412.13	105.58	1.11	383638.90	537411.57	N 32 3 16.85	W 104 12 45.28
	11894.00	90.11	358.45	9651.31	2506.76	2507.09	103.11	0.43	383733.86	537409.11	N 32 3 17.79	W 104 12 45.30
	11988.00	91.07	358.72	9650.35	2600.74	2601.06	100.79	1.06	383827.82	537406.78	N 32 3 18.72	W 104 12 45.33
	12083.00	90.79	359.10	9648.80	2695.71	2696.03	98.99	0.50	383922.78	537404.98	N 32 3 19.66	W 104 12 45.35
	12178.00	89.10	358.59	9648.90	2790.69	2791.00	97.07	1.86	384017.75	537403.08	N 32 3 20.60	W 104 12 45.37
	12272.00	88.43	357.96	9650.92	2884.64	2884.94	94.24	0.98	384111.67	537400.23	N 32 3 21.53	W 104 12 45.40
	12367.00	88.04	358.51	9653.85	2979.55	2979.85	91.32	0.71	384206.58	537397.31	N 32 3 22.47	W 104 12 45.44
	12461.00	91.68	359.52	9654.08	3073.53	3073.82	89.70	4.02	384300.54	537395.69	N 32 3 23.40	W 104 12 45.45
	12556.00	90.62	358.33	9652.17	3168.49	3168.78	87.92	1.68	384395.49	537393.91	N 32 3 24.34	W 104 12 45.47
	12650.00	88.99	358.59	9652.49	3262.46	3262.74	85.39	1.76	384489.44	537391.39	N 32 3 25.27	W 104 12 45.50
	12745.00	87.70	358.34	9655.23	3357.40	3357.66	82.85	1.38	384584.36	537388.84	N 32 3 26.21	W 104 12 45.53
	12839.00	91.01	359.32	9656.29	3451.36	3451.62	80.93	3.67	384678.31	537386.92	N 32 3 27.14	W 104 12 45.55
	12934.00	91.07	358.33	9654.57	3546.33	3546.59	78.98	1.04	384773.26	537384.98	N 32 3 28.08	W 104 12 45.57
	13029.00	91.46	358.68	9652.47	3641.28	3641.53	76.51	0.55	384868.20	537382.50	N 32 3 29.02	W 104 12 45.60
	13123.00	92.41	358.57	9649.30	3735.21	3735.45	74.25	1.02	384962.11	537380.25	N 32 3 29.95	W 104 12 45.62
	13218.00	91.85	358.44	9645.77	3830.11	3830.35	71.77	0.61	385057.00	537377.77	N 32 3 30.89	W 104 12 45.65
	13312.00	91.35	359.11	9643.14	3924.06	3924.29	69.78	0.89	385150.93	537375.76	N 32 3 31.82	W 104 12 45.67
	13407.00	90.67	359.36	9641.47	4019.04	4019.27	68.50	0.76	385245.90	537374.49	N 32 3 32.76	W 104 12 45.69
	13502.00	90.11	359.54	9640.82	4114.04	4114.26	67.59	0.62	385340.89	537373.58	N 32 3 33.70	W 104 12 45.70
	13596.00	89.50	359.69	9641.14	4208.03	4208.26	66.96	0.67	385434.87	537372.95	N 32 3 34.63	W 104 12 45.70
	13691.00	89.33	359.67	9642.11	4303.03	4303.25	66.42	0.18	385529.86	537372.42	N 32 3 35.57	W 104 12 45.71
	13785.00	90.06	359.96	9642.61	4397.03	4397.25	66.12	0.84	385623.85	537372.12	N 32 3 36.50	W 104 12 45.71
	13880.00	87.87	0.01	9644.33	4492.01	4492.23	66.10	2.31	385718.82	537372.09	N 32 3 37.44	W 104 12 45.71
	13974.00	88.60	0.77	9647.22	4585.95	4586.18	66.74	1.12	385812.76	537372.73	N 32 3 38.37	W 104 12 45.70
	14069.00	92.08	359.63	9646.66	4680.94	4681.16	67.07	3.85	385907.73	537373.06	N 32 3 39.31	W 104 12 45.70
	14163.00	90.95	357.68	9644.17	4774.88	4775.10	64.86	2.40	386001.66	537370.86	N 32 3 40.24	W 104 12 45.72
	14258.00	92.41	358.15									

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 ° ' '')
	17285.00	90.95	0.47	9641.12	7895.61	7895.91	86.11	1.74	389122.18	537392.11	N 32 4 11.12	W 104 12 45.43
	17474.00	90.67	359.84	9638.45	8084.58	8084.89	86.63	0.36	389311.15	537392.62	N 32 4 12.99	W 104 12 45.42
	17569.00	89.44	358.96	9638.35	8179.58	8179.88	85.63	1.59	389406.13	537391.62	N 32 4 13.93	W 104 12 45.43
	17664.00	90.00	359.34	9638.82	8274.57	8274.86	84.22	0.71	389501.11	537390.21	N 32 4 14.87	W 104 12 45.45
	17758.00	89.55	359.80	9639.19	8368.57	8368.86	83.52	0.68	389595.10	537389.51	N 32 4 15.80	W 104 12 45.46
	17853.00	89.50	359.25	9639.98	8463.56	8463.85	82.73	0.58	389690.08	537388.72	N 32 4 16.74	W 104 12 45.46
	17947.00	90.73	358.99	9639.79	8557.55	8557.84	81.29	1.34	389784.06	537387.28	N 32 4 17.67	W 104 12 45.48
	18042.00	89.55	358.06	9639.55	8652.53	8652.81	78.84	1.58	389879.02	537384.83	N 32 4 18.61	W 104 12 45.51
	18136.00	92.80	358.63	9637.63	8746.46	8746.73	76.13	3.51	389972.94	537382.12	N 32 4 19.54	W 104 12 45.54
	18231.00	90.56	358.74	9634.84	8841.40	8841.66	73.95	2.36	390067.86	537379.94	N 32 4 20.48	W 104 12 45.56
	18326.00	89.78	358.68	9634.56	8936.38	8936.64	71.81	0.82	390162.82	537377.80	N 32 4 21.42	W 104 12 45.59
	18420.00	90.11	358.69	9634.65	9030.36	9030.61	69.65	0.35	390256.79	537375.64	N 32 4 22.35	W 104 12 45.61
	18514.00	87.59	358.76	9636.54	9124.31	9124.56	67.56	2.68	390350.73	537373.55	N 32 4 23.28	W 104 12 45.63
	18609.00	87.31	358.69	9640.76	9219.20	9219.44	65.45	0.30	390445.60	537371.44	N 32 4 24.21	W 104 12 45.66
	18704.00	90.06	359.70	9642.94	9314.16	9314.40	64.11	3.08	390540.55	537370.11	N 32 4 25.15	W 104 12 45.67
	18798.00	90.06	358.48	9642.85	9408.15	9408.39	62.62	1.30	390634.53	537368.62	N 32 4 26.08	W 104 12 45.69
	18893.00	90.39	358.98	9642.47	9503.13	9503.36	60.52	0.63	390729.49	537366.51	N 32 4 27.02	W 104 12 45.71
	18988.00	91.40	358.38	9640.99	9598.10	9598.32	58.33	1.24	390824.45	537364.32	N 32 4 27.96	W 104 12 45.73
	19082.00	91.12	357.16	9638.82	9692.02	9692.23	54.67	1.33	390918.34	537360.67	N 32 4 28.89	W 104 12 45.77
	19177.00	89.78	358.48	9638.17	9786.95	9787.15	51.06	1.98	391013.26	537357.05	N 32 4 29.83	W 104 12 45.82
	19272.00	89.94	359.22	9638.41	9881.94	9882.13	49.15	0.80	391108.23	537355.15	N 32 4 30.77	W 104 12 45.84
	19366.00	88.88	0.77	9639.37	9975.93	9976.12	49.14	2.00	391202.21	537355.14	N 32 4 31.70	W 104 12 45.84
	19556.00	90.78	1.43	9639.94	10165.87	10166.08	52.79	1.08	391392.15	537358.79	N 32 4 33.58	W 104 12 45.79
	19650.00	90.45	0.81	9638.93	10259.84	10260.05	54.63	0.75	391486.12	537360.62	N 32 4 34.51	W 104 12 45.77
	19745.00	92.07	1.05	9636.84	10354.79	10355.01	56.17	1.72	391581.07	537362.16	N 32 4 35.45	W 104 12 45.75
	19840.00	91.68	0.09	9633.73	10449.73	10449.96	57.11	1.09	391676.00	537363.11	N 32 4 36.39	W 104 12 45.74
	19935.00	89.50	359.14	9632.75	10544.72	10544.94	56.47	2.50	391770.98	537362.47	N 32 4 37.33	W 104 12 45.74
	20029.00	88.71	359.64	9634.22	10638.71	10638.93	55.47	0.99	391864.95	537361.47	N 32 4 38.26	W 104 12 45.75
	20124.00	89.33	0.07	9635.85	10733.69	10733.91	55.23	0.79	391959.93	537361.23	N 32 4 39.20	W 104 12 45.75
	20218.00	89.33	359.85	9636.95	10827.69	10827.90	55.17	0.23	392053.92	537361.16	N 32 4 40.13	W 104 12 45.75
Toe HL Cross	20280.00	89.47	0.03	9637.59	10889.68	10889.90	55.10	0.37	392115.91	537361.10	N 32 4 40.75	W 104 12 45.75
	20313.00	89.55	0.12	9637.88	10922.68	10922.90	55.14	0.37	392148.90	537361.14	N 32 4 41.07	W 104 12 45.75
Last SLB MWD Survey	20383.00	91.91	1.40	9636.98	10992.66	10992.88	56.07	3.84	392218.88	537362.07	N 32 4 41.76	W 104 12 45.74
Projection to Bit	20425.00	91.91	1.40	9635.58	11034.62	11034.85	57.10	0.00	392260.84	537363.09	N 32 4 42.18	W 104 12 45.73

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 3 *** 3-D 97.071% Confidence 3.0000 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	28.000	1/98.425	30.000	30.000	A001Ma_MWD-Depth Only	ST01 / Chevron HH SO 8 5 FED 003 No. 3H ST01 MWD to 20425ft
	1	28.000	28.000	Act Stns	30.000	30.000	A001Ma_MWD-Depth Only	ST01 / Chevron HH SO 8 5 FED 003 No. 3H ST01 MWD to 20425ft
	1	28.000	372.000	Act Stns	30.000	30.000	A001Ma_MWD	ST01 / Chevron HH SO 8 5 FED 003 No. 3H ST01 MWD to 20425ft
	1	372.000	20425.000	Act Stns	30.000	30.000	B001Ma_MWD+HDGM	ST01 / Chevron HH SO 8 5 FED 003 No. 3H ST01 MWD to 20425ft