

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
"As-Drilled"

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45101	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLFCAMP (GAS)
⁴ Property Code 321649	⁵ Property Name HH SO 17 20 FED 001	⁶ Well Number 2H
⁷ OGRID No. 4323	⁸ Operator Name CHEVRON U.S.A. INC.	⁹ Elevation 3257'

¹⁰ Surface Location

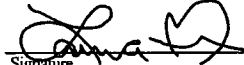
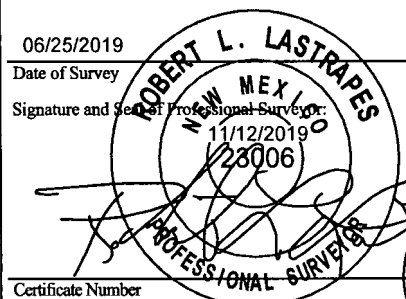
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	8	26 SOUTH	27 EAST, N.M.P.M.		305'	SOUTH	1873'	WEST	EDDY

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	20	26 SOUTH	27 EAST, N.M.P.M.		247'	SOUTH	1663'	WEST	EDDY

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

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

¹⁶ KICK OFF POINT X= 536,743' Y= 382,043' LAT. 32.050296° N LONG. 104.214741° W X= 577,927' Y= 382,100' LAT. 32.050418° N LONG. 104.215235° W FINAL FIRST TAKE POINT X= 536,692' Y= 381,456' LAT. 32.048682° N LONG. 104.214908° W X= 577,875' Y= 381,513' LAT. 32.048804° N LONG. 104.215402° W MID POINT X= 536,663' Y= 376,479' LAT. 32.034999° N LONG. 104.215019° W X= 577,847' Y= 376,535' LAT. 32.035121° N LONG. 104.215513° W FINAL LAST TAKE POINT X= 536,735' Y= 371,559' LAT. 32.021476° N LONG. 104.214804° W X= 577,919' Y= 371,616' LAT. 32.021598° N LONG. 104.215297° W	HH SO 17 20 FED 001 2H WELL X= 536,858' Y= 382,112' LAT. 32.050485° N LONG. 104.214368° W X= 578,042' Y= 382,169' LAT. 32.050606° N LONG. 104.214862° W ELEV. +3257' NAVD 88 CORNER COORDINATES TABLE (NAD 27) A - Y=387143.09, X=534935.36 B - Y=381810.94, X=534988.20 C - Y=381799.23, X=540303.95 D - Y=376480.27, X=535066.16 E - Y=376474.90, X=540354.10 F - Y=371149.70, X=535082.62 G - Y=371148.59, X=540391.30 ACTUAL BOTTOM HOLE LOCATION X= 536,745' Y= 371,397' LAT. 32.021028° N LONG. 104.214773° W X= 577,928' Y= 371,453' LAT. 32.021151° N LONG. 104.215266° W	Sec. 8 1873' 305' Kick Off Point @ 9,246' MD 236' FSL, 1757' FWL Final First Take Point @ 10,157' MD 351' FNL, 1698' FWL Mid Point @ 15,147.84' MD Sec. 17 Sec. 20 1663' 247' Final Last Take Point @ 20,071' MD 410' FSL, 1654' FWL	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.  3/3/2020 Signature Date Laura Becerra Printed Name L.Becerra@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. 06/25/2019 Date of Survey Signature and Seal of Professional Surveyor:  Certificate Number
--	--	---	--

PL 4-10-20

Intent ☐ As Drilled ☒

API # 30-015-45101			
Operator Name: CHEVRON USA INC		Property Name: HH SO 17 20 FED 001	Well Number 2H

Kick Off Point (KOP)

UL N	Section 8	Township 26S	Range 27E	Lot	Feet 236	From N/S FSL	Feet 1,757	From E/W FWL	County EDDY
Latitude 32.050418					Longitude 104.215235			NAD NAD 83/86	

First Take Point (FTP)

UL C	Section 17	Township 26S	Range 27E	Lot	Feet 351	From N/S FNL	Feet 1,698	From E/W FWL	County EDDY
Latitude 32.048804					Longitude 104.215402			NAD NAD 83/86	

Last Take Point (LTP)

UL N	Section 20	Township 26S	Range 27E	Lot	Feet 410	From N/S FSL	Feet 1,654	From E/W FWL	County EDDY
Latitude 32.021598					Longitude 104.215297			NAD NAD 83/86	

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 #			
Operator Name:		Property Name:	Well Number

KZ 06/29/2018

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

February 4, 2019

Chevron USA Incorporated
6301 Deauville Blvd.
Midland TX 79706

Re:

8, 26S, 27E, Eddy NM
N 32.05061 W 104.21486

CLIENT: Chevron USA Incorporated
WELL: HH SO 17 20 Fed 001 No. 2H
FIELD: Purple Sage-Wolfcamp (Gas)

RIG: Patterson 270
COUNTY: Eddy
API NO: 30-015-45101
JOB NO: 18MLD3947

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation (P-5 No. 754900).
Other information required by your office is as follows.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Fredy Portillo FE	HH SO 17 20 Fed 001 No. 2H Original Hole	79.00 Ft to 20176.00 Ft	August 26, 2018 to January 27, 2019	TelePacer SlimPulse

If any other information is required, please contact the undersigned at the above letterhead and phone number.
Sincerely,

Dana Lasher
Field Service Manager

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

Well Reference:
8, 26S, 27E, Eddy NM
N 32.05061 W 104.21486

I, Fredy Portillo certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of August 26, 2018 through January 27, 2019, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 79.00 feet to a depth of 20176.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of Chevron USA Incorporated for the HH SO 17 20 Fed 001 No. 2H Well (Original Hole) API No. 30-015-45101 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By
Fredy Portillo
FE

Fredy Portillo

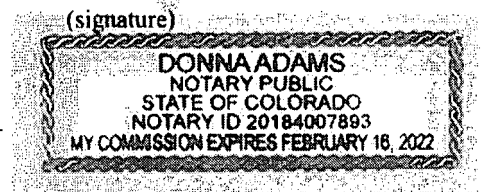
Subscribed and Sworn to before me this 4th day of February (month) 2019 (yr)

My Commission expires:

2-16-2022

D. Adams
Notary Public

Adams County Colorado
(County State)





Chevron HH SO 17 20 Fed 001 No. 2H MWD Off to 20234ft Survey Geodetic Report

(Def Survey)

Report Date: January 28, 2019 - 09:23 AM
 Client: Chevron
 Field: NM Eddy County (NAD 27)

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 179.490 ° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft

Structure / Slot: Chevron HH SO 17 20 Fed 001 No. 2H / HH SO 17 20 Fed 001 No. 2H

TVD Reference Datum: RKB = 28ft

Well: HH SO 17 20 Fed 001 No. 2H
 Borehole: HH SO 17 20 Fed 001 No. 2H
 UWI / API#: Unknown / Unknown
 Survey Name: Chevron HH SO 17 20 Fed 001 No. 2H MWD Off to 20234ft
 Survey Date: December 31, 2018
 Tort / AHD / DDI / ERD Ratio: 234.427 ° / 10831.203 ft / 6.718 / 1.102
 Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 3' 1.74614", W 104° 12' 51.72958"
 Location Grid N/E Y/X: N 382112.000 ftUS, E 536858.000 ftUS
 CRS Grid Convergence Angle: 0.0631 °
 Grid Scale Factor: 0.99991065
 Version / Patch: 2.10.753.0

TVD Reference Elevation: 3285.000 ft above MSL
 Seabed / Ground Elevation: 3257.000 ft above MSL
 Magnetic Declination: 7.270 °
 Total Gravity Field Strength: 998.4301mgN (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 47817.081 nT
 Magnetic Dip Angle: 59.676 °
 Declination Date: December 31, 2018
 Magnetic Declination Model: HDGM 2019
 North Reference: Grid North
 Grid Convergence Used: 0.0631 °
 Total Corr Mag North→Grid North: 7.2069 °

Local Coord Referenced To: Well Head

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 ° ' '')
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	382112.00	536858.00	N 32 3 1.75	W 104 12 51.73
First SLB MWD Survey	79.00	0.17	304.68	79.00	-0.07	0.07	-0.10	0.22	382112.07	536857.90	N 32 3 1.75	W 104 12 51.73
	232.00	0.23	304.68	232.00	-0.38	0.37	-0.54	0.04	382112.37	536857.46	N 32 3 1.75	W 104 12 51.74
	404.00	0.13	260.70	404.00	-0.54	0.54	-1.01	0.10	382112.54	536856.99	N 32 3 1.75	W 104 12 51.74
	505.00	0.35	263.62	505.00	-0.50	0.48	-1.43	0.22	382112.48	536856.57	N 32 3 1.75	W 104 12 51.75
	597.00	0.22	258.94	597.00	-0.43	0.42	-1.88	0.14	382112.42	536856.12	N 32 3 1.75	W 104 12 51.75
	693.00	0.23	114.63	693.00	-0.32	0.30	-1.89	0.45	382112.30	536855.11	N 32 3 1.75	W 104 12 51.75
	785.00	0.75	223.94	784.99	0.19	-0.21	-2.14	0.93	382111.79	536855.86	N 32 3 1.74	W 104 12 51.75
	877.00	2.15	240.28	876.96	1.46	-1.50	-4.06	1.57	382110.50	536855.94	N 32 3 1.73	W 104 12 51.78
	972.00	3.27	249.47	971.85	3.26	-3.33	-8.14	1.26	382108.67	536849.86	N 32 3 1.71	W 104 12 51.82
	1067.00	4.04	250.08	1066.66	5.30	-5.42	-13.83	0.81	382106.58	536844.18	N 32 3 1.69	W 104 12 51.89
	1162.00	4.94	240.38	1161.37	8.40	-8.58	-20.53	1.24	382103.42	536837.47	N 32 3 1.66	W 104 12 51.97
	1256.00	5.40	234.01	1254.99	12.94	-13.18	-27.63	0.78	382098.82	536830.38	N 32 3 1.62	W 104 12 52.05
	1351.00	4.34	232.43	1349.64	17.70	-18.00	-34.09	1.12	382094.00	536823.91	N 32 3 1.57	W 104 12 52.13
	1446.00	3.03	223.65	1444.45	21.67	-22.01	-38.67	1.50	382089.99	536819.33	N 32 3 1.53	W 104 12 52.18
	1542.00	3.58	226.59	1540.29	25.53	-25.91	-42.60	0.80	382086.10	536815.40	N 32 3 1.49	W 104 12 52.22
	1636.00	4.65	232.03	1634.04	29.84	-30.27	-47.74	1.21	382081.74	536810.27	N 32 3 1.45	W 104 12 52.28
	1731.00	4.89	234.33	1728.71	34.52	-35.00	-54.06	0.32	382077.01	536803.94	N 32 3 1.40	W 104 12 52.36
	1827.00	4.02	228.42	1824.42	39.08	-39.62	-59.90	1.02	382072.39	536798.10	N 32 3 1.35	W 104 12 52.43
	1920.00	2.97	222.08	1917.25	43.00	-43.57	-63.96	1.20	382068.43	536794.05	N 32 3 1.32	W 104 12 52.47
	2015.00	2.60	226.04	2012.14	46.29	-46.89	-67.16	0.44	382065.11	536790.85	N 32 3 1.28	W 104 12 52.51
	2110.00	1.91	226.97	2107.06	48.84	-49.47	-69.87	0.73	382062.54	536788.14	N 32 3 1.26	W 104 12 52.54
	2205.00	1.64	228.30	2202.02	50.81	-51.45	-72.04	0.29	382060.55	536785.97	N 32 3 1.24	W 104 12 52.57
	2300.00	1.26	224.60	2296.99	52.44	-53.10	-73.79	0.41	382058.90	536784.22	N 32 3 1.22	W 104 12 52.59
	2395.00	0.90	213.26	2391.97	53.80	-54.47	-74.93	0.44	382057.54	536783.08	N 32 3 1.21	W 104 12 52.60
	2490.00	0.73	219.45	2486.96	54.88	-55.56	-75.72	0.20	382056.45	536782.28	N 32 3 1.20	W 104 12 52.61
	2585.00	0.62	209.71	2581.95	55.79	-56.47	-76.36	0.17	382055.53	536781.64	N 32 3 1.19	W 104 12 52.62
	2679.00	0.40	193.13	2675.95	56.55	-57.23	-76.69	0.28	382054.77	536781.32	N 32 3 1.18	W 104 12 52.62
	2774.00	0.89	326.19	2770.95	56.25	-56.94	-77.18	1.26	382055.06	536780.83	N 32 3 1.18	W 104 12 52.63
	2869.00	1.55	331.56	2865.92	54.50	-55.20	-78.20	0.70	382056.80	536779.81	N 32 3 1.20	W 104 12 52.64
	2964.00	1.23	329.25	2960.90	52.49	-53.19	-79.33	0.34	382058.81	536778.68	N 32 3 1.22	W 104 12 52.65
	3059.00	0.87	318.61	3055.88	51.06	-51.78	-80.33	0.43	382060.23	536777.68	N 32 3 1.23	W 104 12 52.66
	3154.00	0.73	320.33	3150.87	50.05	-50.77	-81.19	0.15	382061.23	536776.81	N 32 3 1.24	W 104 12 52.67
	3249.00	0.60	310.48	3245.86	49.25	-49.98	-81.96	0.18	382062.02	536776.05	N 32 3 1.25	W 104 12 52.68
	3344.00	0.45	302.94	3340.86	48.72	-49.46	-82.65	0.17	382062.55	536775.36	N 32 3 1.26	W 104 12 52.69
	3439.00	0.38	286.70	3435.86	48.42	-49.16	-83.26	0.14	382062.84	536774.74	N 32 3 1.26	W 104 12 52.70
	3533.00	0.29	260.74	3529.86	48.36	-49.11	-83.80	0.19	382062.89	536774.21	N 32 3 1.26	W 104 12 52.70
	3627.00	0.06	291.45	3623.86	48.38	-49.13	-84.08	0.26	382062.87	536773.93	N 32 3 1.26	W 104 12 52.71
	3722.00	0.25	261.73	3718.86	48.39	-49.14	-84.33	0.21	382062.86	536773.68	N 32 3 1.26	W 104 12 52.71
	3817.00	0.11	223.77	3813.85	48.48	-49.24	-84.60	0.19	382062.77	536773.41	N 32 3 1.26	W 104 12 52.71
	3912.00	0.24	248.71	3908.85	48.62	-49.38	-84.85	0.16	382062.63	536773.16	N 32 3 1.26	W 104 12 52.72
	4007.00	0.17	178.96	4003.85	48.83	-49.59	-85.03	0.25	382062.41	536772.98	N 32 3 1.26	W 104 12 52.72
	4101.00	0.29	191.29	4097.85	49.20	-49.96	-85.07	0.14	382062.04	536772.94	N 32 3 1.25	W 104 12 52.72
	4196.00	0.23	172.48	4192.85	49.63	-50.39	-85.09	0.11	382061.62	536772.91	N 32 3 1.25	W 104 12 52.72
	4290.00	0.23	167.41	4286.85	50.00	-50.76	-85.03	0.02	382061.25	536772.98	N 32 3 1.24	W 104 12 52.72
	4385.00	0.20	158.34	4381.85	50.34	-51.10	-84.93	0.05	382060.91	536773.08	N 32 3 1.24	W 104 12 52.72
	4480.00	0.13	214.17	4476.85	50.58	-51.34	-84.93	0.18	382060.66	536773.08	N 32 3 1.24	W 104 12 52.72
	4574.00	0.30	178.22	4570.85	50.92	-51.68	-84.98	0.22	382060.33	536773.03	N 32 3 1.24	W 104 12 52.72
	4670.00	0.23	150.79	4666.85	51.34	-52.10	-84.88	0.15	382059.91	536773.13	N 32 3 1.23	W 104 12 52.72
	4765.00	0.20	176.93	4761.85	51.67	-52.43	-84.77	0.11	382059.58	536773.23	N 32 3 1.23	W 104 12 52.72
	4859.00	0.34	176.51	4855.85	52.11	-52.87	-84.75	0.15	382059.13	536773.26	N 32 3 1.22	W 104 12 52.71
	4954.00	0.45	172.32	4950.84	52.77	-53.52	-84.68	0.12	382058.48	536773.33	N 32 3 1.22	W 104 12 52.71
	5049.00	0.56	189.33	5045.84	53.59	-54.35	-84.71	0.19	382057.66	536773.30	N 32 3 1.21	W 104 12 52.71
	5144.00	0.50	181.63	5140.84	54.46	-55.22	-84.79	0.10	382056.78	536773.21	N 32 3 1.20	W 104 12 52.72
	5239.00	0.68	184.81	5235.83	55.44	-56.20	-84.85	0.19	382055.81	536773.16	N 32 3 1.19	W 104 12 52.72
	5334.00	0.73	185.08	5330.82	56.60	-57.36	-84.95	0.05	382054.64	536773.05	N 32 3 1.18	W 104 12 52.72
	5427.00	0.91	193.82	5423.82	57.91	-58.67	-85.18	0.24	382053.34	536772.83	N 32 3 1.17	W 104 12 52.72
	5522.00	1.01	186.79	5518.80	59.47	-60.23	-85.46	0.16	382051.77	536772.55	N 32 3 1.15	W 104 12 52.72
	5617.00	1.06	181.62	5613.79	61.18	-61.94	-85.59	0.11	382050.08	536772.42	N 32 3 1.13	W 104 12 52.72
	5711.00	0.67	195.21	5707.78	62.58	-63.34	-85.75	0.47	382048.66	536772.25	N 32 3 1.12	W 104 12 52.73
	5806.00	0.75	211.19	5802.77	63.64	-64.41	-86.22	0.22	382047.60	536771.79	N 32 3 1.11	W 104 12 52.73
	5900.00	1.08	209.63	5896.76	64.93	-65.71	-86.98	0.35	382046.30	536771.03	N 32 3 1.10	W 104 12 52.74
	5995.00	0.28	240.88	5991.75	65.82	-66.60	-87.62	0.90	382045.41	536770.38	N 32 3 1.09	W 104 12 52.75
	6090.00	0.11	335.35	6086.75	65.84	-66.63	-87.86	0.32	382045.38	536770.14	N 32 3 1.09	W 104 12 52.75
	6184.00	0.20	171.41	6180.75	65.92	-66.71	-87.88	0.33	382045.30	536770.13	N 32 3 1.09	W 104 12 52.75
	6280.00	0.60	185.60	6276.75	66.59	-67.37	-87.90	0.43	382044.63	536770.11	N 32 3 1.08	W 104 12 52.75
	6374.00	0.76	173.70	6370.74	67.70	-68.48	-87.88	0.23	382043.52	536770.13	N 32 3 1.07	W 104 12 52.75
	6469.00	0.35	177.61	6465.73	68.62	-69.40	-87.80	0.43	382042.61	536770.21	N 32 3 1.06	W 104 12 52.75

...HH SO 17 20 Fed 001 No. 2H Chevron HH SO 17 20 Fed 001 No. 2H MWD Off to 20234ft

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 ° ' '')
	6564.00	0.29	251.28	6560.73	68.98	-69.77	-88.02	0.41	382042.24	536769.99	N 32 3 1.06	W 104 12 52.75
	6659.00	0.78	301.54	6655.73	68.71	-69.51	-88.79	0.67	382042.50	536769.21	N 32 3 1.06	W 104 12 52.76
	6754.00	1.16	319.28	6750.72	67.64	-68.44	-89.97	0.51	382043.57	536768.04	N 32 3 1.07	W 104 12 52.78
	6849.00	1.43	315.06	6845.69	66.05	-66.87	-91.44	0.30	382045.14	536766.57	N 32 3 1.09	W 104 12 52.79
	6944.00	1.20	317.13	6940.67	64.47	-65.30	-92.95	0.25	382046.70	536765.06	N 32 3 1.10	W 104 12 52.81
	7039.00	0.90	319.06	7035.65	63.17	-64.01	-94.12	0.32	382048.00	536763.89	N 32 3 1.11	W 104 12 52.82
	7134.00	0.74	298.24	7130.64	62.33	-63.18	-95.16	0.38	382048.83	536762.85	N 32 3 1.12	W 104 12 52.84
	7228.00	1.10	276.23	7224.63	61.95	-62.81	-96.60	0.51	382049.20	536761.41	N 32 3 1.13	W 104 12 52.85
	7323.00	1.68	275.29	7319.60	61.70	-62.58	-98.89	0.61	382049.42	536759.12	N 32 3 1.13	W 104 12 52.88
	7417.00	1.17	275.50	7413.57	61.46	-62.36	-101.22	0.54	382049.64	536756.79	N 32 3 1.13	W 104 12 52.91
	7512.00	0.76	262.58	7508.56	61.43	-62.35	-102.81	0.49	382049.65	536755.20	N 32 3 1.13	W 104 12 52.92
	7606.00	0.58	252.67	7602.55	61.65	-62.57	-103.88	0.23	382049.43	536754.13	N 32 3 1.13	W 104 12 52.94
	7702.00	0.73	228.25	7698.54	62.19	-63.13	-104.80	0.33	382048.88	536753.21	N 32 3 1.12	W 104 12 52.95
	7797.00	0.80	238.88	7793.54	62.93	-63.87	-105.82	0.17	382048.13	536752.19	N 32 3 1.12	W 104 12 52.96
	7892.00	0.65	233.93	7888.53	63.58	-64.53	-106.82	0.17	382047.47	536751.19	N 32 3 1.11	W 104 12 52.97
	7987.00	0.56	250.05	7983.52	64.05	-65.01	-107.70	0.20	382047.00	536750.31	N 32 3 1.10	W 104 12 52.98
	8082.00	0.46	292.00	8078.52	64.05	-65.02	-108.49	0.40	382046.98	536749.52	N 32 3 1.10	W 104 12 52.99
	8177.00	0.35	277.77	8173.52	63.87	-64.84	-109.13	0.16	382047.17	536748.88	N 32 3 1.11	W 104 12 53.00
	8272.00	0.43	269.98	8268.52	63.82	-64.80	-109.77	0.10	382047.20	536748.24	N 32 3 1.11	W 104 12 53.01
	8366.00	0.39	274.90	8362.51	63.79	-64.77	-110.44	0.06	382047.23	536747.57	N 32 3 1.11	W 104 12 53.01
	8461.00	0.24	244.68	8457.51	63.84	-64.83	-110.94	0.23	382047.17	536747.07	N 32 3 1.11	W 104 12 53.02
	8556.00	0.48	257.56	8552.51	64.01	-65.00	-111.51	0.27	382047.00	536746.50	N 32 3 1.10	W 104 12 53.03
	8650.00	0.50	223.43	8646.51	64.38	-65.38	-112.18	0.31	382046.62	536745.83	N 32 3 1.10	W 104 12 53.03
	8745.00	0.36	224.89	8741.50	64.89	-65.90	-112.67	0.15	382046.11	536745.34	N 32 3 1.10	W 104 12 53.04
	8840.00	0.52	212.06	8836.50	65.48	-66.47	-113.11	0.20	382045.53	536744.90	N 32 3 1.09	W 104 12 53.04
	8934.00	0.46	204.83	8930.50	66.17	-67.18	-113.50	0.09	382044.83	536744.51	N 32 3 1.08	W 104 12 53.05
	9028.00	0.48	233.51	9024.49	66.74	-67.75	-113.97	0.25	382044.25	536744.04	N 32 3 1.08	W 104 12 53.05
	9103.00	0.29	265.25	9099.49	66.94	-67.96	-114.42	0.37	382044.05	536743.59	N 32 3 1.07	W 104 12 53.06
	9219.00	0.83	289.77	9215.49	66.67	-67.70	-115.50	0.50	382044.31	536742.51	N 32 3 1.08	W 104 12 53.07
	9268.00	4.62	178.27	9264.44	68.52	-69.55	-115.77	10.17	382042.46	536742.24	N 32 3 1.06	W 104 12 53.08
	9314.00	11.36	179.49	9309.96	74.91	-75.94	-115.68	14.66	382036.07	536742.33	N 32 3 1.00	W 104 12 53.07
	9363.00	16.03	181.21	9357.56	86.50	-87.54	-115.78	9.57	382024.47	536742.23	N 32 3 0.88	W 104 12 53.08
	9409.00	20.50	185.45	9401.23	100.87	-101.91	-116.68	10.13	382010.10	536741.33	N 32 3 0.74	W 104 12 53.09
	9457.00	24.30	185.18	9445.60	119.06	-120.12	-118.37	7.92	381991.89	536739.64	N 32 3 0.56	W 104 12 53.11
	9504.00	28.86	184.65	9487.62	139.99	-141.07	-120.16	9.72	381970.94	536737.85	N 32 3 0.35	W 104 12 53.13
	9553.00	32.46	185.67	9529.77	164.85	-165.95	-122.42	7.42	381946.07	536735.59	N 32 3 0.11	W 104 12 53.15
	9599.00	35.03	185.09	9568.01	190.27	-191.39	-124.81	5.63	381920.63	536733.20	N 32 2 59.85	W 104 12 53.18
	9648.00	38.80	180.68	9607.19	219.63	-220.76	-126.24	9.40	381891.26	536731.77	N 32 2 59.56	W 104 12 53.20
	9694.00	41.34	178.01	9642.39	249.23	-250.36	-125.88	6.67	381861.66	536732.13	N 32 2 59.27	W 104 12 53.20
	9742.00	46.28	177.89	9677.02	282.44	-283.56	-124.69	10.29	381828.47	536733.32	N 32 2 58.94	W 104 12 53.18
	9789.00	52.38	179.01	9707.63	318.06	-319.18	-123.75	13.10	381792.85	536734.26	N 32 2 58.59	W 104 12 53.17
	9837.00	57.81	180.87	9735.09	357.41	-358.53	-123.73	11.75	381753.51	536734.28	N 32 2 58.20	W 104 12 53.17
	9883.00	61.31	183.96	9758.40	397.00	-398.14	-125.42	9.56	381713.90	536732.59	N 32 2 57.81	W 104 12 53.19
	9932.00	64.53	187.81	9780.71	440.34	-441.51	-129.91	9.60	381670.53	536728.10	N 32 2 57.38	W 104 12 53.24
	9978.00	68.92	188.32	9798.88	482.11	-483.34	-135.84	9.60	381628.70	536722.17	N 32 2 56.96	W 104 12 53.31
	10027.00	75.39	188.38	9813.89	528.18	-529.47	-142.61	13.20	381582.58	536715.40	N 32 2 56.51	W 104 12 53.39
	10073.00	81.23	190.36	9823.21	572.53	-573.89	-149.95	13.38	381538.17	536708.07	N 32 2 56.07	W 104 12 53.48
	10122.00	86.59	192.04	9828.40	620.22	-621.66	-159.41	11.46	381490.39	536698.60	N 32 2 55.60	W 104 12 53.59
Heel HL Cross	10136.00	87.29	192.16	9829.15	633.86	-635.33	-162.34	5.09	381476.73	536695.67	N 32 2 55.46	W 104 12 53.62
	10168.00	88.90	192.42	9830.21	665.05	-666.58	-169.15	5.09	381445.48	536688.87	N 32 2 55.15	W 104 12 53.70
	10263.00	89.97	191.31	9831.15	757.83	-759.54	-188.68	1.62	381352.53	536669.34	N 32 2 54.23	W 104 12 53.93
	10358.00	91.92	191.51	9829.58	850.77	-852.65	-207.47	2.06	381259.43	536650.55	N 32 2 53.31	W 104 12 54.15
	10452.00	90.72	188.31	9827.42	943.18	-945.21	-223.64	3.63	381166.88	536634.38	N 32 2 52.40	W 104 12 54.34
	10640.00	91.96	186.52	9823.02	1129.32	-1131.57	-247.89	1.16	380980.53	536610.13	N 32 2 50.55	W 104 12 54.62
	10727.00	92.58	186.55	9819.57	1215.60	-1217.94	-257.79	0.71	380894.17	536600.24	N 32 2 49.70	W 104 12 54.74
	10762.00	92.78	187.07	9817.94	1250.27	-1252.66	-261.93	1.59	380859.46	536596.09	N 32 2 49.35	W 104 12 54.79
	10857.00	92.17	187.10	9813.83	1344.35	-1346.84	-273.64	0.64	380765.28	536584.39	N 32 2 48.42	W 104 12 54.93
	10952.00	91.65	184.75	9810.67	1438.69	-1441.27	-283.44	2.53	380670.86	536574.58	N 32 2 47.49	W 104 12 55.04
	11047.00	92.06	183.95	9807.59	1533.30	-1535.95	-290.64	0.95	380576.19	536567.38	N 32 2 46.55	W 104 12 55.13
	11141.00	91.48	182.51	9804.69	1627.05	-1629.75	-295.94	1.65	380482.40	536562.09	N 32 2 45.62	W 104 12 55.19
	11236.00	92.17	181.34	9801.66	1721.92	-1724.65	-299.12	1.43	380387.51	536558.90	N 32 2 44.68	W 104 12 55.23
	11331.00	91.55	177.93	9798.58	1816.85	-1819.58	-298.52	3.65	380292.58	536559.51	N 32 2 43.74	W 104 12 55.22
	11426.00	91.07	177.51	9796.41	1911.78	-1914.48	-294.74	0.87	380197.69	536563.29	N 32 2 42.80	W 104 12 55.18
	11521.00	91.14	177.94	9794.58	2006.72	-2009.39	-290.97	0.46	380102.79	536567.06	N 32 2 41.86	W 104 12 55.14
	11616.00	91.00	178.09	9792.80	2101.67	-2104.32	-287.68	0.22	380007.88	536570.35	N 32 2 40.93	W 104 12 55.10
	11711.00	91.17	177.87	9791.00	2196.62	-2199.24	-284.33	0.29	379912.96	536573.69	N 32 2 39.99	W 104 12 55.06
	11805.00	91.20	177.48	9789.06	2290.55	-2293.14	-280.52	0.42	379819.07	536577.51	N 32 2 39.06	W 104 12 55.02
	11900.00	91.68	177.99	9786.67	2385.48	-2388.04	-276.77	0.74	379724.18	536581.26	N 32 2 38.12	W 104 12 54.98
	11995.00	91.41	177.87	9784.11	2480.41	-2482.94	-273.34	0.31	379629.29	536584.69	N 32 2 37.18	W 104 12 54.94
	12090.00	91.96	177.84	9781.32	2575.33	-2577.83	-269.78	0.58	379534.40	536588.24	N 32 2 36.24	W 104 12 54.90
	12185.00	92.17	177.23	9777.89	2670.21	-2672.68	-265.70	0.68	379439.56	536592.32	N 32 2 35.30	W 104 12 54.85
	12280.00	92.10	177.43	9774.35	2765.08	-2767.51	-261.28	0.22	379344.74	536596.75	N 32 2 34.36	W 104 12 54.80
	12375.00	92.06	177.19	9770.91	2859.95	-2862.35	-256.82	0.26	379249.91	536601.20	N 32 2 33.42	W 104 12 54.75
	12470.00	92.10	177.26	9767.46	2954.81	-2957.17	-252.23	0.08	379155.10	536605.80	N 32 2 32.49	W 104 12 54.70
	12565.00	92.03	178.06	9764.03	3049.70	-3052.03	-248.35	0.84	379060.25	536609.67	N 32 2 31.55	W 104 12 54.65
	12660.00	91.86	178.04	9760.81	3144.61	-3146.92	-245.12	0.18	378965.37	536612.90	N 32 2 30.61	W 104 12 54.62
	12754.00	91.58	180.19	9757.99	3238.56	-3240.86	-243.67	2.31	378871.43	536614.38	N 32 2 29.68	W 104 12 54.60
	1											

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 ° ' '')
	14652.00	90.41	179.83	9727.66	5135.35	-5137.30	-196.73	0.22	37675.17	536661.28	N 32 2 10.91	W 104 12 54.08
	14747.00	89.90	179.88	9727.40	5230.34	-5232.30	-196.49	0.54	376880.18	536661.52	N 32 2 9.97	W 104 12 54.08
	14842.00	89.24	179.77	9728.11	5325.34	-5327.30	-196.20	0.70	376785.19	536661.81	N 32 2 9.03	W 104 12 54.08
	14937.00	88.66	179.81	9729.85	5420.32	-5422.28	-195.86	0.61	376690.22	536662.16	N 32 2 8.09	W 104 12 54.07
	15032.00	89.48	180.18	9731.39	5515.30	-5517.27	-195.85	0.95	376595.24	536662.17	N 32 2 7.15	W 104 12 54.08
	15127.00	88.69	179.61	9732.91	5610.29	-5612.25	-195.67	1.03	376500.26	536662.34	N 32 2 6.21	W 104 12 54.07
	15221.00	89.00	180.37	9734.81	5704.26	-5706.23	-195.66	0.87	376406.29	536662.36	N 32 2 5.28	W 104 12 54.08
	15316.00	88.87	180.39	9736.57	5799.24	-5801.21	-196.29	0.14	376311.32	536661.73	N 32 2 4.34	W 104 12 54.08
	15412.00	89.04	179.07	9738.32	5895.22	-5897.19	-195.84	1.39	376215.34	536662.18	N 32 2 3.39	W 104 12 54.08
	15507.00	88.97	179.15	9739.97	5990.20	-5992.17	-194.36	0.11	376120.38	536663.66	N 32 2 2.45	W 104 12 54.06
	15601.00	89.21	178.49	9741.47	6084.18	-6086.14	-192.42	0.75	376026.42	536665.59	N 32 2 1.52	W 104 12 54.04
	15696.00	88.87	178.25	9743.06	6179.16	-6181.10	-190.55	0.88	375931.46	536667.47	N 32 2 0.58	W 104 12 54.02
	15790.00	89.45	178.77	9744.43	6273.15	-6275.08	-188.93	0.80	375837.49	536669.09	N 32 1 59.65	W 104 12 54.00
	15885.00	88.55	178.21	9746.09	6368.12	-6370.03	-186.42	1.12	375742.55	536671.59	N 32 1 58.71	W 104 12 53.98
	15979.00	89.62	179.41	9747.59	6462.10	-6463.99	-184.47	1.71	375648.60	536673.54	N 32 1 57.78	W 104 12 53.96
	16073.00	89.45	179.70	9748.36	6556.09	-6557.99	-183.74	0.36	375554.61	536674.27	N 32 1 56.85	W 104 12 53.95
	16263.00	90.86	181.55	9747.84	6746.04	-6747.96	-185.81	1.22	375364.65	536672.20	N 32 1 54.97	W 104 12 53.97
	16358.00	90.17	181.39	9746.99	6840.98	-6842.93	-188.25	0.75	375269.70	536669.77	N 32 1 54.03	W 104 12 54.00
	16453.00	90.28	181.25	9746.62	6935.93	-6937.90	-190.44	0.19	375174.73	536667.58	N 32 1 53.09	W 104 12 54.03
	16548.00	90.72	182.02	9745.79	7030.86	-7032.86	-193.15	0.93	375079.78	536664.87	N 32 1 52.15	W 104 12 54.06
	16643.00	91.00	182.28	9744.36	7125.75	-7127.78	-196.71	0.40	374984.87	536661.30	N 32 1 51.21	W 104 12 54.11
	16737.00	92.86	182.71	9741.20	7219.56	-7221.63	-200.80	2.03	374891.03	536657.21	N 32 1 50.28	W 104 12 54.15
	16832.00	90.45	180.82	9738.45	7314.43	-7316.54	-203.73	3.22	374796.13	536654.29	N 32 1 49.35	W 104 12 54.19
	16927.00	89.11	181.42	9738.82	7409.39	-7411.52	-205.58	1.55	374701.16	536652.44	N 32 1 48.41	W 104 12 54.21
	17022.00	89.59	182.39	9739.89	7504.30	-7506.46	-208.74	1.14	374606.23	536649.28	N 32 1 47.47	W 104 12 54.25
	17116.00	89.69	181.44	9740.48	7598.21	-7600.40	-211.88	1.02	374512.29	536646.14	N 32 1 46.54	W 104 12 54.29
	17306.00	88.76	179.35	9743.05	7788.16	-7790.37	-213.19	1.20	374322.35	536644.83	N 32 1 44.66	W 104 12 54.31
	17401.00	88.76	180.27	9745.11	7883.14	-7885.34	-212.88	0.97	374227.38	536645.14	N 32 1 43.72	W 104 12 54.30
	17496.00	89.11	180.37	9746.88	7978.11	-7980.32	-213.41	0.38	374132.40	536644.61	N 32 1 42.78	W 104 12 54.31
	17591.00	90.28	179.89	9747.38	8073.10	-8075.32	-213.62	1.33	374037.42	536644.40	N 32 1 41.84	W 104 12 54.31
	17686.00	89.73	179.30	9747.37	8168.10	-8170.32	-212.95	0.85	373942.43	536645.07	N 32 1 40.90	W 104 12 54.31
	17781.00	89.48	179.76	9748.03	8263.10	-8265.31	-212.17	0.55	373847.44	536645.85	N 32 1 39.96	W 104 12 54.30
	17876.00	89.52	179.99	9748.86	8358.09	-8360.31	-211.97	0.25	373752.46	536646.05	N 32 1 39.02	W 104 12 54.30
	17971.00	90.86	178.64	9748.54	8453.09	-8455.30	-210.83	2.00	373657.48	536647.19	N 32 1 38.08	W 104 12 54.29
	18158.00	89.73	178.62	9747.58	8640.06	-8642.24	-206.36	0.60	373470.55	536651.66	N 32 1 36.23	W 104 12 54.24
	18253.00	90.03	178.98	9747.78	8735.05	-8737.22	-204.37	0.49	373375.58	536653.65	N 32 1 35.29	W 104 12 54.22
	18348.00	90.07	180.42	9747.70	8830.05	-8832.21	-203.87	1.52	373280.59	536654.15	N 32 1 34.35	W 104 12 54.21
	18443.00	91.24	179.99	9746.61	8925.03	-8927.20	-204.21	1.31	373185.61	536653.81	N 32 1 33.41	W 104 12 54.22
	18538.00	91.00	178.52	9744.75	9020.01	-9022.18	-202.98	1.57	373090.65	536655.04	N 32 1 32.47	W 104 12 54.20
	18632.00	90.79	177.96	9743.28	9113.98	-9116.12	-200.09	0.64	372996.71	536657.93	N 32 1 31.54	W 104 12 54.17
	18727.00	90.65	178.02	9742.09	9208.94	-9211.05	-196.76	0.16	372901.79	536661.26	N 32 1 30.60	W 104 12 54.13
	18823.00	90.79	177.88	9740.88	9304.89	-9306.98	-193.33	0.21	372805.87	536664.69	N 32 1 29.65	W 104 12 54.09
	18917.00	91.03	177.59	9739.39	9398.84	-9400.90	-189.61	0.40	372711.96	536668.41	N 32 1 28.72	W 104 12 54.05
	19012.00	90.17	177.15	9738.40	9493.77	-9495.79	-185.25	1.02	372617.08	536672.77	N 32 1 27.78	W 104 12 54.00
	19107.00	90.79	177.04	9737.60	9588.68	-9590.67	-180.44	0.66	372522.21	536677.58	N 32 1 26.84	W 104 12 53.95
	19202.00	91.62	177.36	9735.60	9683.58	-9685.53	-175.80	0.94	372427.35	536682.22	N 32 1 25.90	W 104 12 53.90
	19378.00	92.20	175.72	9729.74	9859.24	-9861.11	-165.18	0.99	372251.80	536692.83	N 32 1 24.16	W 104 12 53.77
	19472.00	92.17	175.02	9726.15	9952.93	-9954.73	-157.60	0.74	372158.18	536700.41	N 32 1 23.24	W 104 12 53.69
	19568.00	90.86	175.73	9723.61	10048.65	-10050.38	-149.86	1.55	372062.54	536708.15	N 32 1 22.29	W 104 12 53.60
	19663.00	89.90	174.75	9722.98	10143.38	-10145.05	-141.98	1.44	371967.88	536716.03	N 32 1 21.35	W 104 12 53.51
	19757.00	90.31	176.10	9722.81	10237.14	-10238.75	-134.48	1.50	371874.19	536723.53	N 32 1 20.43	W 104 12 53.42
	19852.00	92.13	176.19	9720.79	10332.03	-10333.60	-129.75	2.92	371779.35	536728.26	N 32 1 19.49	W 104 12 53.37
	19947.00	92.93	179.43	9716.60	10426.93	-10428.48	-127.78	1.55	371684.47	536730.23	N 32 1 18.55	W 104 12 53.35
	20042.00	91.27	177.25	9713.11	10521.84	-10523.37	-125.03	2.88	371589.59	536732.98	N 32 1 17.61	W 104 12 53.32
	20136.00	91.10	176.78	9711.17	10615.73	-10617.22	-120.13	0.53	371495.75	536737.88	N 32 1 16.68	W 104 12 53.26
	20152.00	91.06	176.56	9710.87	10631.71	-10633.19	-119.21	1.37	371479.78	536738.80	N 32 1 16.52	W 104 12 53.25
Toe HL Cross	20176.00	91.00	176.24	9710.44	10655.67	-10657.14	-117.70	1.37	371455.83	536740.31	N 32 1 16.29	W 104 12 53.23
Last SLB MWD Survey	20234.00	91.00	176.24	9709.43	10713.57	-10715.01	-113.90	0.00	371397.97	536744.11	N 32 1 15.71	W 104 12 53.19

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	A027Ua_INC-ONLY-Depth Only	HH SO 17 20 Fed 001 No. 2H / Chevron HH SO 17 20 Fed 001 No. 2H MWD Off to 20234ft
	1	28.000	28.000	Act Stns	30.000	30.000	A027Ua_INC-ONLY-Depth Only	HH SO 17 20 Fed 001 No. 2H / Chevron HH SO 17 20 Fed 001 No. 2H MWD Off to 20234ft
	1	28.000	79.000	Act Stns	30.000	30.000	A027Ua_INC-ONLY	HH SO 17 20 Fed 001 No. 2H / Chevron HH SO 17 20 Fed 001 HH SO 17 20 Fed 001 No. 2H / Chevron HH SO 17 20 Fed 001
	1	79.000	20234.000	Act Stns	30.000	30.000	B001Ma_MWD+HDGM	HH SO 17 20 Fed 001 No. 2H / Chevron HH SO 17 20 Fed 001